Five-Year Review Report

First Five-Year Review Report

For

Allied Paper, Inc./Portage Creek/Kalamazoo River Site

Allegan and Kalamazoo Counties, Michigan

October, 2007

PREPARED BY:

United States Environmental Protection Agency
Region 5
Chicago, Illinois

Approved by: Date:

for Ralph Dollhopf, Acting
Superfund Division Director
U.S. EPA

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Appendix A Copy of Newspaper Public Notice

List of Acronyms

AOC	Administrative Order on Consent
BRA	Baseline Risk Assessment
BERA	Baseline Ecological Risk Assessment
CD	Consent Decree
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CFR	Code of Federal Regulations
CY^3	Cubic yards
FS	Feasibility Study
FYR	Five-Year Review
HHRA	Human Health Risk Assessment
ICs	Institutional Controls
KRSG	Kalamazoo River Study Group
KSSS	King Street Storm Sewer
MDEQ	Michigan Department of Environmental Quality
MDNR	Michigan Department of Natural Resources
MDOT	Michigan Department of Transportation
NCP	National Contingency Plan
NREPA	Environmental Remediation, of the Natural Resources and Environmental Protection Act, 1994PA 451
NPL	National Priorities List
O&M	Operation & Maintenance
OU	Operable Unit
PCB	Polychlorinated biphenyl
PRP	Potentially Responsible Party
RAO	Remedial Action Objectives
RA	Remedial Action
RD	Remedial Design
RI/FS	Remedial Investigation/Feasibility Study
ROD	Record of Decision
Site	Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund site
SMOA	Superfund Memorandum of Agreement
U.S. EPA	United States Environmental Protection Agency

Executive Summary

The Allied Paper Inc./Portage Creek/Kalamazoo River Superfund site (Site) is located in Allegan and Kalamazoo Counties, Michigan. The Site includes approximately 80 miles of the Kalamazoo River (from Morrow Dam to Lake Michigan), adjacent river banks and formerly impounded floodplains, as well as a 3-mile stretch of Portage Creek. Six operable units (OUs) have been identified for response action at the Site including:

- OU1 - Allied Paper, Inc;
- OU2 - Willow Boulevard/A-Site Landfill;
- OU3 - King Highway Landfill;
- OU4 - 12th Street Landfill;
- OU5 – 80-miles of the Kalamazoo River including a 3-mile stretch of Portage Creek; and
- OU7 – Former Plainwell Paper Mill Property.

This is the first five-year review for the Site. The triggering action for this statutory review is the start of the on-site construction of the Remedial Action (RA) at the King-Highway Landfill Operable Unit 3 (OU3), as discussed in Section I of this five-year review report. Although the construction of the remedial action recently began at OU4, the on-site construction of the RA at OU3 occurred five years earlier (10/21/02) than it did at OU4. Consequently, OU3 "triggered" this first five-year review. A five-year review is required due to the fact that hazardous substances, pollutants, or contaminants remain at OU3 and OU4 above levels that allow for unlimited use and unrestricted exposure.

This first five-year review report includes a protectiveness determination for OU3 and OU4. This report does not include a protectiveness determination for OU1, OU2, OU5, and OU7 because the RA has not yet started at these OUs. However, all six operable units are being reviewed at this time to keep all OUs on the same five-year review schedule.

This five-year review found that the remedy at OU3 currently protects human health and the environment in the short-term. The landfill cap is in good condition and prevents PCB-contaminated material in the landfill from migrating, via erosion or surface water runoff, into the Kalamazoo River. The cap is also an effective barrier that prevents exposure, via direct contact, to the contaminated material by on-site workers, trespassers, and anglers. The cap also minimizes infiltration of rainwater and reduces the potential for leachate generation and the potential for polychlorinated biphenyl (PCBs) in groundwater to migrate into the Kalamazoo River. Public access to the landfill is restricted by a locked chain-link fence and sheet pile, where present, and prevents people from being exposed to the contaminated material. Institutional Controls (ICs) are not yet in place. However, in order for the remedy to be protective in the long-term, the following actions will need to be taken: (1) submit a schedule or plan to the United States Environmental Protection Agency (U.S. EPA) and the Michigan Department of Environmental Quality (MDEQ) for resolving property ownership issues with respect to the Michigan Department of Transportation (MDOT) and city of Kalamazoo

properties and for implementing ICs at the landfill and MDOT and city of Kalamazoo properties; and (2) submit a landfill gas mitigation plan to MDEQ that will satisfy its concerns about the off-site migration of methane gas at the south end of the landfill. Long term protectiveness requires compliance with effective ICs. U.S. EPA will ensure that long-term stewardship of OU3, as well as every other operable unit of the Site, includes implementation and maintenance of each component of the selected remedy, including any necessary ICs.

The remedy at the 12th Street Landfill OU4 is not protective because the remedy has not yet been constructed and because access controls are inadequate to protect trespassers from short-term risks associated with remedy construction. A chain-link fence is installed along the west side of the landfill but not on the east, north, and south sides of the landfill, and trespassers can easily gain access to the landfill. A chain-link fence will need to be installed on all sides of the landfill to prevent public access to the property and prevent trespassers from being exposed to PCB-contaminated material during the on-going construction activities. Long-term protectiveness requires compliance with existing ICs. Although ICs are in place, an evaluation is necessary of whether groundwater use at the landfill needs to be restricted and, if so, whether existing ICs appropriately restrict or prevent groundwater use at the landfill property. This evaluation will be made during the remedial design phase of the remedy. U.S. EPA will ensure that long-term stewardship of OU4, as well as every other operable unit of the Site, includes implementation and maintenance of each component of the selected remedy, including any necessary ICs.

Five-Year Review Summary Form

SITE IDENTIFICATION		
Site name *(from WasteLAN)*: **Allied Paper, Inc./Portage Creek/Kalamazoo River**		
EPA ID *(from WasteLAN)*: **MID006007306**		
Region: 5	**State: MI**	**City/County: Allegan and Kalamazoo Counties**
SITE STATUS		
NPL status: ■ Final ☐ Deleted ☐ Other (specify)		
Remediation status (choose all that apply): ☐ Under Construction ■ Operating ☐ Complete		
Multiple OUs?* ■ YES ☐ NO	**Construction completion date:** ___/___/_____	
Has site been put into reuse? ☐ YES ■ NO		
REVIEW STATUS		
Lead agency: ■ EPA ☐ State ☐ Tribe ☐ Other Federal Agency _____		
Author name: Shari Kolak		
Author title: Remedial Project Manager	**Author affiliation: United States Environmental Protection Agency**	
Review period:** 6/ 06/2007 to 10 /21/ 2007		
Date(s) of site inspection: 8 /1/2007		
Type of review: ■ Post-SARA ☐ Pre-SARA ☐ NPL-Removal only ☐ Non-NPL Remedial Action Site ☐ NPL State/Tribe-lead ☐ Regional Discretion		
Review number: ■ 1 (first) ☐ 2 (second) ☐ 3 (third) ☐ Other (specify) _____		
Triggering action: ■ Actual RA Onsite Construction at King Highway Landfill OU3 ☐ Actual RA Start ☐ Construction Completion ☐ Previous Five-Year Review Report ☐ Other (specify)		
Triggering action date *(from WasteLAN)*: _10/ 21/ 2002		
Due date *(five years after triggering action date)*: 10/ 21/2007		

* ["OU" refers to operable unit.]

Five-Year Review Summary Form (cont'd.)

King Highway Landfill OU3

Issues:

- Institutional controls are not in place at the landfill property, including the land currently owned by MDOT and city of Kalamazoo which is located within the site security fence. The remedy is not protective until effective ICs are placed on both properties and are monitored and maintained.

- MDEQ approval of the Final Completion of Construction Report and the Final Operation & Maintenance Plan (O&M) is pending resolution of the MDOT and city of Kalamazoo property ownership issues; and

- Methane gas has migrated off-site in concentrations that exceed threshold criteria.

Recommendations and Follow-up Actions:

- Submit a schedule or plan to U.S. EPA and MDEQ for 1) resolving issues associated with the MDOT and city of Kalamazoo properties and 2) implementing ICs at the landfill property and the MDOT and city of Kalamazoo properties;

- U.S. EPA will prepare an IC Plan to plan for necessary corrective measures and long-term stewardship; and

- Submit a landfill gas mitigation plan to MDEQ that will satisfy its concerns about the off-site mitigation of methane gas at the south end of the landfill.

Protectiveness Statement:

This five-year review found that the remedy at OU3 currently protects human health and the environment in the short-term. The landfill cap is in good condition and prevents PCB-contaminated material in the landfill from migrating, via erosion or surface water runoff, into the Kalamazoo River. The cap is also an effective barrier that prevents exposure, via direct contact, to the contaminated material by on-site workers, trespassers, and anglers. The cap also minimizes infiltration of rainwater and reduces the potential for leachate generation and the potential for PCBs in groundwater to migrate into the Kalamazoo River. Public access to the landfill is restricted by a locked chain-link fence and sheet pile, where present, and prevents people from being exposed to the contaminated material. Institutional controls are not yet in place. However, in order for the remedy to be protective in the long-term, the following actions will need to be taken: (1) submit a schedule or plan to U.S. EPA and MDEQ for resolving ownership issues associated with the MDOT and city of Kalamazoo properties and for implementing effective ICs at the landfill property and MDOT and city of Kalamazoo properties; and (2) submit a landfill gas mitigation plan to MDEQ that will satisfy its concerns about the off-site migration of methane gas at the south end of the landfill. Long term protectiveness requires compliance with effective ICs. U.S. EPA will ensure that long-term stewardship of OU3, as well as every other operable unit of the Site, includes implementation and maintenance of each component of the selected remedy, including any necessary ICs.

Other Comments: None

Five-Year Review Summary Form (cont'd)

12th Street Landfill OU4

Issues:

- Access controls are inadequate. A chain-link fence is present along the south side of the landfill but there is no fence on the north, east, or west sides of the landfill. Trespassers and anglers can freely enter the property and use the river banks to fish and may become exposed to contaminated material; and

- It is unclear whether groundwater use at the landfill needs to be restricted and, if so, whether existing ICs appropriately restrict groundwater use within the landfill property.

Recommendations and Follow-up Actions:

- Install a chain-link fence on the north, east, and west sides of landfill; post warning signs every 200 feet along the fence and on all entry gates; and place permanent markers around the boundary of the landfill describing the restricted area and the nature of the restrictions; and

- Evaluate whether groundwater use at the landfill should be restricted and, if so, amend existing ICs as necessary to ensure that ICs adequately restrict groundwater use at the landfill property.

Protectiveness Statement for OU4:

The remedy at the 12th Street Landfill OU4 is not protective because the remedy has not yet been constructed and because access controls are inadequate to protect trespassers from short-term risks associated with remedy construction. A chain-link fence is installed along the west side of the landfill but not on the east, north, and south sides of the landfill and trespassers can easily gain access to the landfill. A chain-link fence will need to be installed on all sides of the landfill to prevent public access to the property and prevent trespassers from being exposed to PCB-contaminated material during the on-going construction activities. Long-term protectiveness requires compliance with existing ICs. Although ICs are in place, an evaluation is necessary of whether groundwater use at the landfill needs to be restricted and, if so, whether existing ICs appropriately restrict or prevent groundwater use at the landfill property. This evaluation will be made during remedial design phase of the remedy. U.S. EPA will ensure that long-term stewardship of OU4, as well as every other operable unit of the Site, includes implementation and maintenance of each component of the selected remedy, including any necessary ICs.

Other Comments: None

Five-Year Review Report

I. Introduction

The United States Environmental Protection Agency (U.S. EPA) has conducted a five-year review of the remedial actions implemented at the Allied Paper, Inc./Portage Creek/Kalamazoo River site (Site). The Michigan Department of Environmental Quality (MDEQ) assisted U.S. EPA in providing an analysis of information in support of this five-year review. The five-year review was conducted from June 2007 through October 2007. This report documents the results of the review.

The purpose of five-year reviews is to determine whether the remedy at a site is protective of human health and the environment. The methods, findings, and conclusions of reviews are documented in the Five-Year Review Report. In addition, the Five-Year Review Report identifies issues found during the review, if any, and recommendations to address them.

This review is required by statute. U.S. EPA must implement five-year reviews consistent with the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and the National Oil and Hazardous Substances Pollutant Contingency Plan (NCP). CERCLA §121 (c), as amended, states:

> If the President selects a remedial action that results in any hazardous substances, pollutants, or contaminants remaining at the site, the President shall review such remedial action no less often than each five years after the initiation of such remedial action to assure that human health and the environment are being protected by the remedial action being implemented.

The NCP part 300.430(f)(4)(ii) of the Code of Federal Regulations (CRF) states:

> If a remedial action is selected that results in hazardous substances, pollutants, or contaminants remaining at the site above levels that allow for unlimited use and unrestricted exposure the lead agency shall review such action no less often than every five years after the initiation of the selected remedial action.

This is the first five-year review for the Allied Paper, Inc./Portage Creek/Kalamazoo River site. The triggering action for this statutory review is the start of the on-site construction of the Remedial Action (RA) at the King-Highway Landfill Operable Unit 3 (OU3) as shown in EPA's WasteLAN database: 10/21/2002. Operable Unit 3 is one of six OUs that have been identified at the Site. Although the construction of the remedial action recently began at OU4, the on-site construction of the RA at OU3 occurred five years earlier (10/21/02) than it did at OU3; thus, OU3 "triggered" this first-year review. This five-year review is required due to the fact that hazardous substances, pollutants, or contaminants remain at OU3 and OU4 above levels that allow for unlimited use and unrestricted exposure.

The Site consists of six OUs including:

- OU1 - Allied Paper, Inc.;
- OU2 - Willow Boulevard/A-Site Landfill;
- OU3 - King Highway Landfill;
- OU4 - 12th Street Landfill;
- OU5 - 80-miles of the Kalamazoo River including a 3-mile stretch of Portage Creek; and
- OU7 - Former Plainwell Paper Mill Property

All OUs are in various stages of the Superfund cleanup process. Operable Unit 1, OU5, and OU7 are in the investigation stage called the "Remedial Investigation/Feasibility Study (RI/FS)." A Record of Decision (ROD) (or cleanup decision) has been issued for OU2, OU3, and OU4. The remedial action (RA) was constructed at OU3 and the remedial action is under construction at OU4. Although a ROD was issued for OU2, construction of the RA has not yet begun. The Agency's five-year review guidance requires remedies to be evaluated for protectiveness at only those OUs where on-site construction of the RA has started. Although on-site construction of the RA is generally completed at OU3 and has recently started at OU4, all OUs are being reviewed at this time to keep all OUs on the same five-year review schedule.

II. Site Chronology

Table 1 lists the chronology of events for the Allied Paper, Inc./Portage Creek/Kalamazoo River site.

Table I

Month/Year	***Events and Milestones***
April 1970-1971	*Initial discovery of problem or contamination*
August 30, 1990	*NPL Listing*
December 1990	*Administrative agreement signed between the Michigan Department of Natural Resources (MDNR) and certain potentially responsible parties ("PRPs") for RI/FS work at the Site*
July 1993	*RI/FS start at OU4*
July/Sept. 1994	*RI/FS complete at OU3*
July 1997	*RI/FS complete at OU4*
February 1998	*ROD issued by MDEQ (successor to MDNR) for OU3, with which U.S. EPA concurred*
June 1998	*122(h) Cash-out agreement signed between U.S.EPA and Millennium Holdings for Time Critical Removal Action at Bryant Mill Pond of OU1*
June 1998	*Remedial Design (RD) Start at OU3*
1998-1999	*Removal Action at Bryant Mill Pond of OU1*

February 2000	*Administrative agreement signed between MDEQ and Georgia-Pacific for implementation of the Remedial Design/Remedial Action (RD/RA) at OU3*
September 2001	*ROD Issued by MDEQ for OU4, with which U.S EPA concurred*
January/February 2002	*Site-Specific Amendment to 2002 Superfund Memorandum of Agreement(SMOA) signed between U.S. EPA and MDEQ*
September 2002	*Remedial Design complete at OU3*
October 2002	*Construction Start at OU3*
December 2004	*Consent Decree signed by the United States and Weyerhaeuser Company for RD/RA at OU4 and for a RI/FS and RD/RA at OU7*
January 2006	*RI/FS complete at OU2*
September 2006	*ROD issued by U.S. EPA for OU2, with which MDEQ concurred*
February 2007	*Administrative Order on Consent (AOC) signed for Time-Critical Removal Action at Plainwell Impoundment Area of OU5*
February 2007	*AOC signed for Supplemental RI/FS for OU5*
March 2007	*Removal Action start at Plainwell Impoundment Area of OU5*
May 2007	*Construction start at OU4*

III. Background

A. Site History

The Site is located in the Allegan and Kalamazoo Counties of Michigan. The Site includes approximately 80 miles of the Kalamazoo River (from Morrow Lake Dam to Lake Michigan), adjacent river banks and formerly impounded floodplains, as well as a 3-mile stretch of Portage Creek, (See Figure 1, and Site Location Map). The Site was listed on the National Priorities List (NPL) on August 30, 1990.

The Site is contaminated with PCBs from former paper mills or other former industrial operations along the Kalamazoo River. The former paper mills recycled and/or de-inked and repulped carbonless copy waste paper, which between the years of 1950s and 1970s, contained PCBs as an ink carrier. The wastewater from the paper manufacturing operations was historically discharged to the Kalamazoo River. Processed residuals were placed into on-site lagoons for dewatering or into disposal areas directly on the land. The former lagoons and disposal areas later became known as the landfill OUs.

The MDNR (predecessor to MDEQ) first became concerned about the presence of PCBs in the Kalamazoo River in 1971, after routine surface water and biota sampling at the mouth of the river indicated that PCBs were discharging to Lake Michigan via the Kalamazoo River and that the PCBs were widely bioavailable for uptake by fish and aquatic organisms.

The Site comprises six OUs:

- OU1 - Allied Paper, Inc.;
- OU2 - Willow Boulevard/A-Site Landfill;
- OU3 - King Highway Landfill;
- OU4 - 12th Street Landfill;
- OU5 – 80-miles of the Kalamazoo River including a 3-mile stretch of Portage Creek; and
- OU7 – former Plainwell Paper Mill Property.

In addition to OU7, the former Plainwell Paper Mill, three other former paper mills are associated with the Superfund Site. One of the mills was identified as OU6 but U.S. EPA later reclassified the mill property as a potential source of PCBs to the river, and eliminated the OU6 designation. Pursuant to the AOC executed between certain PRPs and U.S. EPA in February of 2007, the former paper mills will be investigated to determine whether any of the mill properties is a source of PCBs to the Kalamazoo River. If any mill is a source of PCBs to the Kalamazoo River, then U.S. EPA will designate that mill property as an OU. The OU will then be investigated under the Superfund Remedial Investigation/Feasibility Study (RI/FS) process.

Six former hydroelectric dams, three owned by the State of Michigan and three by private companies, are also located within the Superfund Site. One of the dams, the Lake Allegan Dam, is an operating hydropower dam; the remaining five dams are no longer operational. In the 1970s, the State of Michigan partially dismantled its three dams, due primarily to public safety concerns posed to kayakers and boaters. As the dams were dismantled, the water level in the river dropped and the contaminated sediment that was once underwater became exposed or visible on the riverbanks and floodplain areas behind the State-owned dams. The U.S. EPA and MDEQ currently estimate that the Site contains approximately 113,000 lbs of PCBs in the river sediment and floodplain soil.

When the Site was listed on the NPL, it was designated a state lead for purposes of conducting the RI/FS. On December 28, 1990, the MDNR and the Potential Responsible Parties (PRPs) signed an administrative agreement pursuant to which several PRPs agreed to perform a RI/FS investigation for the entire Site. Three PRPs signed the administrative agreement with MDNR including Millennium Holdings LLC (formerly HM Holdings), Georgia-Pacific LLC (formerly known as Georgia-Pacific Corporation), and Plainwell Inc. (formerly Simpson Plainwell Paper Company). Plainwell Inc. later filed for bankruptcy. These three PRPs formed a group and were collectively known as the Kalamazoo River Study Group (KRSG). Although not officially identified as a PRP by the State of Michigan, the Fort James Corporation joined the KRSG and agreed to help fund the RI/FS for the Site. In 2002, U.S. EPA identified another PRP, the Weyerhaeuser Company.

In 2002, certain areas of the Site were re-designated as federal-lead due to the agencies' belief that re-designation of certain areas of the Site was in the best interest of the public. Roles and responsibilities for each OU are outlined in the February 2002 Site-Specific Amendment to the Enforcement Agreement for State-Enforcement Lead Sites in Michigan, under the Superfund

Memorandum of Agreement (SMOA) between the MDEQ and U.S. EPA. Since 2002, U.S. EPA has the lead on all OUs except for the Allied Paper Inc. OU1 and the King Highway Landfill OU3. The MDEQ will retain the lead on the King Highway Landfill. In accordance with the April 2007 Site-Specific Amendment to the 2002 Site-Specific Amendment to the SMOA, the MDEQ will have the lead on modifying the PRP RI Report for the Allied Paper Inc. OU1. U.S. EPA will acquire the lead for the Allied Paper Inc. OU1 after (1) U.S. EPA accepts the state-approved RI Report and determines that no additional response activities are necessary to complete the RI; or (2) U.S. EPA determines that, in accordance with the timeframes specified in the 2007 Amendment, that the state-approved RI Report still requires modification or that additional response activities are necessary to complete the RI.

B. Operable Units

B.1. Operable Unit 1

Physical Characteristics

The Allied Paper Inc. OU1 encompasses 89 acres along Portage Creek in the city of Kalamazoo in Kalamazoo County, Michigan. Operable Unit 1 is bordered by Cork Street to the south, Alcott Street to the north, a Conrail Railroad line to the west, and residential/commercial properties to the east (See Figure 2, OU1 Location Map).

Land and Resource Use

According to the MDEQ-modified RI Report, property use in the vicinity of OU1 includes areas that are zoned for industrial, commercial, and residential purposes. Industrial and commercial properties are located to the north and south of OU1 and along portions of the east and west sides of OU1. Residential properties are located along a portion of the east side of OU1 and to the west beyond the railroad tracks.
Operable Unit 1 is an inactive disposal area, but groundwater is being collected along collection sumps and treated prior to being discharged to the city of Kalamazoo wastewater treatment plant. Wetlands are present at OU1.

History of Contamination

When the former paper mills on the Kalamazoo River recycled and/or de-inked and repulped waste paper that included carbonless copy paper, PCBs were present in the wastewater produced from the paper manufacturing process. The wastewater contained large quantities of suspended particles – primarily cellulose and clay. Polychlorinated biphenyls adsorb to the suspended particles in the wastewater. Polychlorinated biphenyls were present in the manufacturing process from at least 1957 until well after production of carbonless copy paper containing PCBs stopped in the 1970s. In the 1950s, the mills began building primitive clarifiers and dewatering or settling lagoons to remove solid particles, and the clarified wastewater was discharged to the rivers and creeks (i.e., Portage Creek).

The Allied Paper Inc.OU1 is divided into individual study areas based on former historic operations (See Figure 3, OU1 Site Plan). According to the MDEQ-modified RI Report, these areas include the Former Operational Areas including, the Bryant Historic Residuals Dewatering Lagoon (HRDL) and Former Residuals Dewatering Lagoons (FRDL), Monarch HRDL, Type III Landfill, Western Disposal Area, and the Alcott Street Properties. All areas received processed wastewater and/or dewatered paper residuals from paper manufacturing operations at the former Allied Paper, Inc. mills. The operational history and volume of contamination for each area of OU1 are discussed below.

- **Former Operational Areas** (Bryant HRDL and FRDLs, Monarch HRDL, Type III Landfill, Western Disposal Area, and the Alcott Street Properties).

    - Bryant HRDL and FRDL*s* – This area consists of six lagoons covering approximately 22 acres. The lagoons were used to settle out residuals from the wastewater generated at the Bryant mills. A clarifier and the earthen-diked HRDL were the primary treatment system, build in 1954. The series of five FRDLs were later added to dewater residuals. The HRDL was filled and has not been used for disposal since the late 1970s. The FRDLs have not been used for disposal since 1989;

    - Monarch HRDL – This 7-acre lagoon was used as part of the initial primary treatment facility for process waste from the Monarch Mill. The facility consisted of a clarifier and an earthen-diked dewatering lagoon. After clarification, the wastewater supernatant was discharged to Portage Creek and the settled residuals were pumped to the Monarch HRDL for dewatering. The Monarch HRDL was used from the early 1950s until the 1960s;

    - Type III Landfill – This 13-acre area was originally licensed as a landfill in 1966 to receive non-process wastes pursuant to State of Michigan requirements. It was then licensed as a Type II landfill and later the designation was changed to a Type III Landfill in 1985 to receive residuals and demolition wastes. Over the period of use (1966 until the late 1980s), the landfill area received various types of industrial waste and residuals; and

    - Western Disposal Area- This area covers approximately 19 acres and is located along the western edge of the Bryant HRDLs, southwest of the former Type III landfill. According to the RI Report, this area was identified as being used as a disposal area for dewatered residuals mined from the HRDLs and FRDLs. By 1986, most of the areas were filled in and vegetation established by 1991.

- **Former Bryant Mill Pond** – Particles in the wastewater discharged from the mills to Portage Creek settled out in the 29-acre Bryant Mill Pond. U.S. EPA conducted a time critical removal action between 1998 and 1999 to address PCBs in the sediment.

- **Residential/Commercial Areas** – (including but not limited to, Former Panelyte, Stryker Corporation, Conrail, Clay Seam Area, East Bank Area, and Other Properties).

    - Panelyte Property and Marsh – this area encompasses approximately 23 acres and contains a fill area located at the southwestern end of the property. This property is a Brownfields Site which is being addressed under a State grant. This property is currently being managed by the MDEQ. Surface water from the Panelyte fill area and Western Disposal area drains toward the Panelyte marsh;

    - Stryker Corporation Property – The parking lots of the Stryker property were constructed over parts of the former Bryant Mill Pond;

    - Conrail Property – The railroad property that extends along the western edge of OU1; and

    - Clay Seam Area – The clay seam is a body of residuals covering approximately a quarter of an acre that is present as a small, nearly vertical bluff on the east side of Portage Creek. Native soils underlie the clay seam at the elevation of the water line. The clay seam extends up to approximately 80 feet inland from the bank of Portage Creek.

Response Activities

Voluntary Response Activities

Between 2000 and 2005, the PRPs conducted a number of interim response measures to stop or prevent the migration of PCBs from the OU into Portage Creek. The interim response measures were voluntarily conducted by the PRPs, and not under an administrative order with the MDEQ or U.S. EPA. The interim response measures included the installation of sheetpile along the Bryant HRDLs and FRDLs to stabilize the existing berm and prevent the Bryant Mill Pond residuals from eroding back into Portage Creek, capping the Bryant HRLDs and FRDLS to prevent erosion and infiltration of rainwater, and installation of a groundwater recovery system to maintain groundwater levels within a foot of the historic norm behind the sheetpile to mitigate the potential for raised groundwater levels to saturate previously unsaturated residuals. In addition, a wastewater treatment plan was installed in the fall of 2004 and began operation in February 2005 to treat groundwater recovered at the OU.

U.S. EPA Time-Critical Removal Action

In 1999, pursuant to a cash-out agreement with MHLLC, U.S. EPA completed a time critical removal action at the Bryant Mill Pond Area, which is a pond that received wastewater discharged by the former Bryant Paper Mills. Approximately 150,000 cubic yards (cy^3) of PCB-contaminated sediment were excavated from the Bryant Mill Pond in an effort to cleanup an upstream area that was a significant source of PCBs to the Kalamazoo River. In 2003, an additional 1,000 cy^3 of contaminated material were removed from the Portage Creek floodplains. All contaminated material was disposed of in the Bryant HRDL and FRDLs of the Allied Paper Inc. OU1.

Basis for Taking Action

There is no basis for taking action at this time as the RI/FS has not been completed nor a ROD issued. Operable Unit 1 is in the RI stage of the Superfund process. The remedial status of OU1 is discussed below.

Remedial Status

On October 26, 2006, MDEQ disapproved the OU1 Revised RI report prepared by Millennium Holdings, LLC and decided to complete the report internally. MDEQ submitted a state-modified RI report for OU1 to U.S. EPA in March 2007. U.S. EPA has reviewed the state-modified RI report and recently provided comments on the report to MDEQ. After U. S. EPA becomes the lead agency, in accordance with the process discussed in Section III.A., of this five-year review report, U.S. EPA will be responsible for overseeing the Feasibility Study (FS) Report and for developing the OU1 ROD.

Since a ROD has not been issued for OU1, a remedial action cannot be discussed or evaluated; therefore, no further discussion of OU1 is contained in this five-year review report.

B.2. Operable Unit 2

Physical Characteristics

The Willow Boulevard/A-Site Landfill OU2 is located southeast of the intersection of Business I-94 and Highway M-96 in Kalamazoo Township, Michigan.
Operable Unit 2 is bordered by the Kalamazoo River to the north and northwest, Davis Creek to the east, and Willow Boulevard Road, former Olmstead Creek, and residential areas to the south (See Figure 4, OU2 Location Map).

Operable Unit 2 is an approximately 32-acre site that consists of two disposal areas: the Willow Boulevard Landfill (including the Drainageway area), and the A-Site Landfill. Operable Unit 2 also includes impacted areas adjacent to and/or near the Willow Boulevard/A-Site Landfills (See Figure 5, OU2 Site Plan).

The A-Site Landfill occupies approximately 22-acres and contains approximately 475,400 cubic yards of PCB-contaminated material. The Willow Boulevard Landfill (including the Drainageway Area) occupies approximately 11-acres and contains an estimated volume of 152,100 cubic yards of contaminated residuals. Impacted areas adjacent to and/or near the landfills include the area east of Davis Creek; south of the A-Site Berm (including former Olmstead Creek); and the area near Monitoring Well AMW-3A. The area east of Davis Creek is approximately 3.5 acres with an estimated volume of 3, 800 cubic yards; south of the A-Site berm is approximately 2.5 acres with an estimate volume of 2,900; and the AMW-3A area is approximately 0.25 acres with an estimated volume of 100 cubic yards of PCB-contaminated residual, soil, and sediment.

Land and Resource Use

Land use in the vicinity of OU2 includes industrial, commercial, and residential properties. The A-Site Landfill and Willow Boulevard Landfill are zoned for industrial use. The land south of OU2 is zoned residential and industrial. Operable Unit 2 is currently an inactive landfill. Wetland areas are present at OU2.

No private, commercial, or industrial water wells were identified within ¼ mile of OU2. However, ten wells were identified within ½ mile of OU2. Four of the ten wells are public water supply wells owned by the city of Kalamazoo. Four are domestic wells, one well is an industrial well, and the usage of the last well is not known. It is not known whether any of the domestic wells within ½ mile of OU2 are being used for drinking water.

History of Contamination

The Willow Boulevard and A-Site landfills were used to dispose of dewatered paper making residuals from the former Allied Paper King Mill and the Georgia-Pacific Kalamazoo Mill. Both mills are located in Kalamazoo, Michigan. Polychlorinated biphenyls were introduced into the waste stream between the 1950s and 1970s. During this time, the paper mills were de-inking and repulping office waste paper, some of which contained carbonless copy paper contaminated with PCBs. Process residuals from the paper manufacturing operations were then disposed of at the Willow Boulevard and at the A-Site Landfills. Over time, PCB-contaminated residuals from the landfills eroded and migrated into the soil and sediment of adjacent areas and/or into the Kalamazoo River. Surface water runoff from the landfills and adjacent areas may also transport PCBs directly into the Kalamazoo River. Therefore, the landfills and adjacent areas may be sources of PCBs to the river and Davis Creek, which empties into the Kalamazoo River.

The A-Site Landfill was originally a series of dewatering (or drainage) lagoons. Paper waste from the King Mill was piped to the A-Site lagoons, and water was allowed to settle out. Paper residuals accumulated within the lagoons, and over time, the A-Site became known as the A-Site Landfill. The A-Site lagoons were active between 1960 and 1967. Operations at the King Mill ended in 1971, and the mill was demolished in 1978. Georgia-Pacific purchased the A-Site in 1975 and used it to dispose of paper waste dug up from the King Highway dewatering lagoons until 1977. From 1977 to 1987, the A-Site received dewatered paper making waste from the Kalamazoo King Mill filter presses. The A-Site ceased to be an active disposal area in 1987, when the King Highway Landfill operations began. The Willow Boulevard Landfill was acquired by Georgia-Pacific from the Kalamazoo Paper Company in 1967. From mid-1960 until 1975, dewatered paper residuals from the Kalamazoo Mill and the King Highway Lagoons were disposed of at the Willow Boulevard Landfill. Disposal activities occurred from the mid-1960s until operations stopped in 1975.

Response Activities

Voluntary Response Activities

Between 1992 and 1999, Georgia-Pacific conducted a number of interim response measures to eliminate or reduce erosion of PCB-containing residual and soil from the landfill into the Kalamazoo River. The interim response measures were voluntarily conducted by Georgia-Pacific, and not under an administrative order with the MDEQ or U.S. EPA.

In 1992, GP installed a chain-link fence around the landfill and reseeded the western portion of the A-Site landfill to promote vegetative growth. In 1998, approximately 1,500 feet of sheet pile was installed between the A-Site and the Kalamazoo River to stabilize the earthen berm along the river and mitigate soil erosion. In 1999, approximately 7,000 cubic yards of PCB-contaminated residual and sediment were excavated from the western bank of the Kalamazoo River adjacent to the landfill. The excavated material was placed into the eastern side the Willow Boulevard portion of OU2. The landfill was then regraded to promote drainage and covered with 6 inches of clean sand as a temporary cover. A portion of the river's edge was also backfilled to create a sand berm along the Kalamazoo River. Geotextile and riprap were placed along a portion of the river's edge to reduce erosion of the riverbanks.

U.S. EPA Time-Critical Removal Action

On November 7, 2006, Georgia-Pacific signed an AOC with U.S. EPA to perform a Time-Critical Removal Action at the former Refuse Area of the former Georgia-Pacific Kalamazoo Mill property and at the Oxbow Area of the former Hawthorne Mill property. The former Kalamazoo and Hawthorne Mill properties are located to the north of OU2, across the Kalamazoo River. During the removal action,

Georgia-Pacific removed approximately 33,203 cy^3 of PCB-containing soil/residual from the Refuse Area and approximately 17,488 cy^3 of PCB-containing soil/residual from the Oxbow Area. Georgia-Pacific also removed contaminated soil from a transformer pad, wastewater pipeline, and from an underground pipe that was located at the former Kalamazoo Mill property. Material excavated from the transformer pad was sent to an off-site licensed landfill for disposal and material excavated from the wastewater pipeline and underground pipe were consolidated into the A-Site. The removal action started in November 2006 and was completed in June 2007. The portion of the A-Site that received the contaminated residual/soil was covered and a berm was constructed to keep surface water runoff from entering Davis Creek and the Kalamazoo River.

Basis for Taking Action

Polychlorinated biphenyls are the primary contaminant of concern at OU2. The media of concern are PCB-contaminated residuals within the Willow Boulevard and A-Site Landfills and PCB-contaminated residual, soil, and/or sediment in areas adjacent to the landfills including the Willow Drainageway, the area south of the A-Site Berm, the area east of Davis Creek, and the area near monitoring well AMW-3A. Polychlorinated biphenyls are the primary risk driver at OU2.

The RI for OU2 was conducted between 1993 and 2000. The maximum PCB concentration in surface residuals at the Willow Boulevard Landfill was less than 4 mg/kg PCB and in subsurface residuals, the maximum concentration was 160 mg/kg. Surficial soil samples were not collected at the Willow Drainageway. The maximum PCB concentration in subsurface soils at the Drainageway was 30 mg/kg. The maximum PCB concentration in surface soil at the Area South of the A-Site Berm was 14 mg/kg PCB and in subsurface soil, the maximum concentration was 37 mg/kg PCB. The maximum PCB concentration in surface sediment at the Former Olmstead Creek was 7.6 mg/kg PCB. The maximum PCB concentration in surface residual, soil, and sediment at the area east of Davis Creek was 36 mg/kg PCB. No subsurface soil samples were collected at this area during the RI. The maximum PCB concentration in surface soil at the AMW-3A areas was 5.9 mg/kg PCB and in subsurface soil, the maximum concentration was 62 mg/kg PCB. Surface soil samples collected at residential properties adjacent to the landfills were either not-detected or below the State of Michigan residential cleanup criteria of 4.0 mg/kg PCB.

A quantitative risk assessment was not conducted at OU2. Instead, potential risks associated with exposure pathways at OU2 were qualitatively assessed to determine which media would need to be targeted for remediation. Exposure pathways assessed in the qualitative risk assessment conducted at OU2 include: ingestion of and dermal contact with contaminated residuals, soil, and sediment; inhalation of airborne releases; and erosion into aquatic habitat. Media evaluated include air, surface soils, residuals and sediment, subsurface soils, surface water, and groundwater/leachate. Potential risk

associated with exposure pathways were qualitatively assessed by comparing maximum PCB concentrations detected in the RI with cleanup criteria based on future land use and protective ranges established in the *Final (Revised) Baseline Ecological Risk Assessment dated April 2003 (BERA).* State of Michigan Part 201 Generic Cleanup Criteria were used in the qualitative assessment of potential risk at OU2.

Based upon the results of the RI and the qualitative assessment of risk to human health and ecological receptors, a response action at OU2 was warranted because PCB concentrations in residuals, soil, and sediment at OU2 exceed the Part 201 Generic Commercial II/Industrial Land Use Criteria of 16 mg/kg PCB (in soil) protective of human health for on-site workers and/or trespassers; the Generic Residential Land Use Criteria of 4 mg/kg PCB (in soil) protective of human health for residential land use; and/or the cleanup range of 5.5 and 8.1 mg/kg PCB (in soil) for the protection of ecological receptors (American Robin) established in the BERA. Additionally, a response action at OU2 was also warranted because of the potential migration of PCBs from the landfills and adjacent areas (via erosion or surface water runoff) into the Kalamazoo River and because PCB concentrations in sediment of the wetland areas may present an unacceptable risk to consumers (e.g., people or mink) of the fish.

Because a remedial action was selected and a ROD issued for OU2, this OU is further discussed in Section IV of this five-year review report.

B.3. Operable Unit 3

Physical Characteristics

The King Highway Landfill OU3 is located within the city of Kalamazoo, Kalamazoo Township, Michigan. OU3 includes the King Highway Landfill, the King Street Storm Sewer floodplain (KSSS), and contaminated river sediments adjacent to the landfill. The OU3 ROD requires the cleanup of these areas, as well as five former waste lagoon areas located at the Georgia-Pacific mill in Kalamazoo (herein referred to as the "Mill Lagoons"). Waste material from the Mill Lagoons was excavated and disposed in the King Highway Landfill. The Mill Lagoons are located north of the landfill across the Kalamazoo River (See Figure 6, OU3 Location Map and Figure 7, OU3 Site Plan).

The King Highway Landfill occupies approximately 15 acres. The Mill Lagoons occupy approximately 7 acres, and the KSSS occupies approximately 1 acre. Operable Unit 3 is bordered by King Highway (M-96) to the south, the Grand Trunk Railroad right-of-way to the west, and the KSSS floodplain and the Kalamazoo River to the north and to the east.

Land and Resource Use

The King Highway Landfill is zoned for industrial or secondary commercial use. The land immediately adjacent to the south and southwest of the landfill is classified for

industrial or secondary commercial use. The land that contains the Mill Lagoons, located at the Georgia-Pacific Mill Property, is zoned for industrial use.

Future land use at the King Highway Landfill property will remain industrial. Institutional Controls were required by the ROD but are not yet in place. As part of the future Institutional Control Plan, a restrictive covenant will be recorded on all deeds comprising the landfill to prohibit all uses of groundwater and all uses of the landfill property that are not consistent with the limited industrial land use category under Part 201.

The projected land use at the Georgia-Pacific Mill Lagoons is not yet known. The ROD for OU3 required deed restrictions also at Mill Lagoons. Pursuant to an AOC between U.S. EPA and certain PRPs, the Georgia Pacific Kalamazoo Mill property will be investigated to determine whether the property is or is not a source of PCBs to the Kalamazoo River. The extent to which additional response activities will be required at the Georgia-Pacific Kalamazoo Mill property has yet to be determined by U.S. EPA and/or MDEQ. U.S. EPA has determined that it is more appropriate to place deed restrictions on the mill lagoons after a cleanup decision is made with regard to the entire Georgia-Pacific Kalamazoo Mill property. Groundwater, which is discharged to the river, is not used as a potable water source at the landfill or downgradient of the landfill.

History of Contamination

During a 15-year period, Georgia-Pacific de-inked office waste paper, which contained carbonless copy paper contaminated with PCBs, at two of the mills located at the Georgia-Pacific Kalamazoo Mill property. Originally, the Kalamazoo Paper Mill consisted of five mills, three for making paper products, and two for finishing and converting. Mills 1 and 3 both performed de-inking operations starting in the early 1950s. Mill 3 discontinued de-inking in the late 1960s, was refurbished, and resumed operations in 1975. Mill 1 de-inked continuously until the late 1970s. Raw paper waste from all the mills was routed to a clarifier. The clarifier effluent was pumped directly into the Kalamazoo River until 1964 which it was rerouted to the city of Kalamazoo Wastewater Treatment Plant.

The underflow from the clarifier was dewatered and disposed of at various locations over the years. From the mid-1950s until the late 1950s, residuals were placed in the Mill Lagoons on the Georgia-Pacific Kalamazoo Mill property. In the late 1950s residuals were sent for dewatering to the King Highway lagoons, which later became the King Highway Landfill. The Mill Lagoons were then only used as an emergency backup system. Georgia-Pacific dewatered residuals in the King Highway lagoons until 1977. After 1977, the King Highway lagoons were not utilized until the lagoons were licensed in 1983 by the MDEQ as a landfill for disposal of paper-making residuals. From 1987 to 1998, Georgia-Pacific used the King Highway Landfill for the disposal of dewatered paper-making residuals. Over time, the contaminated residuals migrated, via erosion or surface water runoff, from the landfills into adjacent areas and/or the Kalamazoo River.

The King Highway landfill is a mono-fill of paper residuals. The landfill covers 15 acres and consists of four cells; Cells 1, 2, 3, and 4. The total volume of residuals in the landfill is estimated at 282,000 cubic yards. Cells 1, 2, and 3 were first licensed by the MDEQ in 1983 under the Michigan Solid Waste Management Action (Act 641) as a Type III landfill. Cell 4 was never permitted as an operating landfill. The majority of residuals in Cell 4 were submerged in a pond formed by the transport of water from the other three cells to Cell 4 through culvert in the dikes. The four cells were separated by dikes approximately 10 to 20 feet high. These dikes were constructed of sand and gravel in the 1950s and were used as access roads. Access roads and no-fill areas comprise 7.9 acres of the King Highway Landfill.

Response Activities

Voluntary Response Activities

Pre-ROD interim measures were voluntarily conducted by Georgia-Pacific and not under an administrative order with the MDEQ. In 1994 and 1996, approximately 1,000 linear feet of sheet piling were installed to stabilize the berm along the northern sides of Cells 1, 2, and 3 of the landfill. The purpose of the interim measure was to prevent berm failure and subsequent migration of contaminated residuals from the landfill into the Kalamazoo River. In 1998, PCB contaminated material was excavated from the King Street Storm Sewer, the Mill Lagoons, and from areas directly adjacent to the landfill. All materials were consolidated back into the landfill.

Basis for Taking Action

The RI for OU3 was conducted in 1993. The maximum PCB concentration in the landfill surface residuals was 3.6 mg/kg. PCB concentrations generally increase with depth through the residuals. However, PCB concentrations in the top eight feet of residuals in Cell 4 are as high as 69 mg/kg. The reason for the difference between Cells 1, 2, and 3 and Cell 4 is that Georgia-Pacific continued to dispose of residuals at the KHL after the use of PCBs in the manufacture of carbonless copy paper ceased. Tests of the residuals that were added to the landfill later in it operational history did not detect PCBs with the exception of one sample in 1987 that contained 6.5 mg/kg PCBs. The maximum PCB concentration found in the top 16 feet of residuals in Cells 1, 2, and 3 was 8.8 mg/kg. Concentrations over 50 mg/kg PCB were detected at depths of 16 to 30 feet. The maximum concentration in the subsurface residuals was 310 mg/kg. Soil below the KHL has a maximum PCB concentration of 9.9 mg/kg.

Total PCB concentrations from samples collected in the KSSS floodplain had PCB concentrations ranging from 0.37 mg/kg to 99 mg/kg. The maximum PCB concentration found in the berms adjacent to the landfill was 77 mg/kg. Analytical results from samples collected at the Mill Lagoons showed PCB concentrations in surface residuals

ranging from 0.2 to 110 mg/kg. Polychlorinated biphenyls were detected in three subsurface residual samples in the Mill Lagoons at concentrations ranging from 3.4 to 70 mg/kg. Five soil samples were collected below the Mill Lagoons. Polychlorinated biphenyls from native soils, below the lagoons, ranged from 0.043 to 2.9 mg/kg.

Polychlorinated biphenyls were not detected in groundwater above performance standards. However, PCBs were detected in a leachate sample collected from Monitoring Well 10R at a concentration of 1.4 ug/L. One surface water sample was collected from the pond in Cell 4 and analyzed for PCB. The analytical results show a PCB concentration of 0.026 ug/L

The presence of PCB-contaminated residuals, soils, and sediment in areas outside the landfill and the Mill Lagoons was evidence that PCBs were migrating, via erosion or surface water runoff, from the landfill and the Mill Lagoons, into adjacent areas and the Kalamazoo River. Additionally, the landfill berms were continually being eroded by surface water run-off and the continued flow of the Kalamazoo River. As a result of the RI, it was concluded that OU2 and the Mill Lagoons are sources and potential sources of PCB contamination to the Kalamazoo River and its floodplain in the vicinity of OU3 and the Mill Lagoons.

A Baseline Risk Assessment (BRA) was conducted at OU3 to evaluate risks to human health and the environment under unremediated conditions. Because the waste at the OU3 is identical (i.e., wastes was generated from the same source at similar concentrations) to the wastes at the Mill Lagoons, the routes of exposure are the same, and the receptors are the same at the OU3, the MDEQ determined that the BRA for OU3 is applicable to the Mill Lagoons. Therefore, a separate BRA for the Mill Lagoons was not conducted. The BRA concluded that the primary migration pathway for the release of PCBs into the river is erosion of residuals from the landfill berms and floodplains and the Mill Lagoons. The largest potential risk and migration pathway is the release of PCB-contaminated residuals due to failure of the landfill berms.

Based upon the results of the RI and BRA, a response action at OU3 and the Mill Lagoons was necessary to eliminate or reduce the potential migration of PCBs to the Kalamazoo River. The largest potential risks identified for ecological receptors were due to past releases of PCBs from the landfill, its berms, and floodplains of the Mill Lagoons. The ecological risk assessment recognized that organisms and fish in the Kalamazoo River bioaccumulate PCBs and pass them up the food chain to other organisms which would feed upon them. The bioaccumulation food chain effects present the greatest potential risk to ecological and human health, via consumption of the Kalamazoo River fish.

Because a remedial action was selected and a ROD issued for OU3, this OU is further discussed in Section IV of this five-year review report.

B.4. Operable Unit 4

Physical Characteristics

The 12th Street Landfill OU4 is located in Otsego Township, approximately ½ mile northwest of the city of Plainwell in Allegan County, Michigan. The landfill occupies approximately 6.5 acres and is bordered by the Kalamazoo River to the east, by wetlands to the north and west, by industrial developed land to the south and southeast, and by a gravel pit operation to the south and southwest (See Figure 8, OU4 Location Map and Figure 9, OU4 Site Plan).

The 12th Street Landfill is located within an environmentally sensitive area. The adjacent woodlands, wetlands, and the former powerhouse discharge channel provide suitable habitat for fish, turtles, and amphibians. Small mammals (i.e., mice, squirrels, woodchucks, mink, raccoons, fox and muskrats) and birds inhabit the areas surrounding the landfill. The Kalamazoo River is part of a bird migratory flyway route for waterfowl species, and the areas surrounding the 12th Street Landfill is a migratory stopover that attracts and supports waterfowl. During nesting season, vegetation in the area provides cover and materials for nesting. Larger mammals, such as white-tailed deer, also use the landfill as evidenced by deer paths running over the top and along the sides of the landfill. Muskrat dens have been observed in the wetlands and there is evidence of extensive burrowing into the sides of the landfill by fox and woodchuck.

Land and Resource Use

Land use in the immediate vicinity of OU4 is characterized as industrial with residential property to the south and southwest. Wetlands are present north and northwest of the OU and the Kalamazoo River and Plainwell Dam are located to the east and southeast.

The 12th Street Landfill is zoned industrial and will remain industrial in the future. A Restrictive Covenant running with the land from the owner of the landfill property to MDEQ as the grantee (MDEQ Reference No: RC-RRD-03-052 on USEPA Site No. 059B) is already in place (See Attachment 6, Restrictive Covenant for OU4). The Agency is a third party beneficiary of this Restrictive Covenant. The Restrictive Covenant was recorded with the Allegan County Registry of Deeds on March 25, 2005, to restrict future land use at the landfill property. Groundwater is not currently used for any purpose at the landfill property. As discussed below, an evaluation of whether groundwater use needs to be restricted at OU4 is necessary. If so, the evaluation must include an assessment of whether the existing covenant appropriately restricts groundwater use at the property. Therefore, an evaluation of existing ICs will be required to determine whether existing ICs adequately restrict or prevent groundwater use at the landfill property. This evaluation will be made during the remedial design phase of the OU4 remedy.

History of Contamination

The 12th St. Landfill was used from 1955 to 1981 for disposal of PCB-containing paper residuals consisting mostly of water, wood fiber, and mineral matter. PCBs were introduced into some of the residuals as a result of the paper manufacturing operations at the former Plainwell Paper Mill between 1957 and 1962. Over time, the contaminated residuals migrated, via erosion or surface water runoff, from the landfills into the adjacent wetlands, woodland areas, adjacent property, and into the powerhouse channel of the Kalamazoo River. The landfill is comprised mostly of paper residuals with some concrete rubble, construction debris, waste lumber, and corroded steel drums. The 12th Street Landfill contains an estimated 208,000 cubic yards of PCB-contaminated residuals. The 12th Street Landfill was closed in 1984, and covered with soil and seeded to promote vegetation.

Response Activities

No voluntary response actions were taken at OU4.

Basis for Taking Action

Sampling during the December 1996 RI confirmed the presence of paper residuals in the berm, in the adjacent wetland area, as well as in the former powerhouse discharge channel. Soil/residual samples were collected from soil and monitoring well borings that were located outside the landfill perimeter, and from two sediment cores collected in the former powerhouse discharge channel adjacent to the east side of the landfill. Elevated PCB concentrations were reported in 24 of the 45 samples analyzed, including both samples collected from the former powerhouse discharge channel, with a maximum concentration of 158 mg/kg. Elevated concentrations of inorganic compounds were also detected in several samples at levels exceeding applicable criteria. Trace concentration of volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs) and pesticides were also reported.

Groundwater samples were collected from 15 monitoring wells and analyzed for VOCs, SVOCs, inorganic compounds, pesticides, and PCBs. Polychlorinated biphenyls were not detected and all other results were either non-detect or below the Part 201 Industrial and Commercial Drinking Water Criteria and Groundwater Surface Water Interface (GSI) Criteria, with the exception of bis(2-Ethuylhexyl) phthalate, which was detected in groundwater at a concentration of 290 micrograms per liter (ug/L). In 1995, a second round of groundwater samples was collected from each monitoring well. Groundwater analysis was limited to PCBs only, and the results indicated non-detectable concentrations.

Three leachate wells were sampled in 1993 and again in 1995. Analytical results from the 1993 sampling event indicate that trace concentrations of various VOCs, SVOCs, and Aldrin were present as well as an elevated concentration of toluene (680 ug/L) in leachate

collected from one leachate well. The toluene concentration exceeds GSI Criteria. In 1995 leachate samples were analyzed only for PCBs. Results indicate that leachate collected from one well had PCB concentrations of 1.4 ug/L.

Due to the similarities between the King Highway Landfill OU3 and the 12th Street Landfill OU4, such as similar waste (PCB-contaminated residuals generated from the same paper recycling process at similar concentrations), identical routes of exposure, and identical receptors, it was assumed that there was a similar level of unacceptable risk at the 12th Street Landfill OU4. Therefore, the King Highway Landfill BRA was used to assess the risks to human health and ecological receptors.

Based upon the results of the RI and BRA, a response action at OU4 was necessary to eliminate or reduce the potential migration of PCBs to the Kalamazoo River. The largest potential risks identified for ecological receptors were due to past releases of PCBs from the landfill into the Kalamazoo River. The ecological risk assessment recognized that organisms and fish in the Kalamazoo River bioaccumulate PCBs and pass them up the food chain to other organisms which would feed upon them. The bioaccumulation food chain effects present the greatest potential risk to ecological and human health, via consumption of the Kalamazoo River fish.

Because a remedial action was selected and a ROD issued for OU4, this OU is further discussed in Section IV of this five-year review report.

B.5. Operable Unit 5

Physical Characteristics

Operable Unit 5 is located in Allegan and Kalamazoo Counties of southwest Michigan. OU5 includes approximately 80 miles of the Kalamazoo River and a 3-mile stretch of Portage Creek (See Figure 10 OU5 Site Map).

Land and Resource Use

The Kalamazoo River is used for recreational purposes (i.e., swimming, boating, and fishing). River water is not used as a drinking water source and is not expected to be used as a drinking water source in the future. Wetland areas are present along areas of the river.

History of Contamination

Former paper mills located on the Kalamazoo River and Portage Creek recycled and/or de-inked and repulped carbonless copy paper, which between 1957 and 1971 contained PCBs as an ink carrier. Although PCB use in the manufacture of carbonless copy paper was discontinued in 1971, the waste streams of the Kalamazoo area paper mills most likely contained PCBs for at least a decade after 1971. The PCB-contaminated wastes

from these paper mills were initially discharged directly to the Kalamazoo River and Portage Creek. Later, waste effluents were sent to clarifiers prior to being discharged to the river and creek. The bottom sludge form these clarifiers were placed in at least four disposal areas (landfills) along the river. Because the PCBs were associated with suspended fine clay particles, the clarifiers were ineffective in stopping the discharge of PCBs. The soils, sediment, water column, groundwater, and biota in and adjacent to an 80-mile stretch of the Kalamazoo River and a 3-mile stretch of Portage Creek are contaminated with PCBs.

The U.S. EPA and MDEQ currently estimate that approximately 113,000 lbs. of PCBs are currently located in the aquatic system. Today, the ongoing, uncontrolled erosion of contaminated paper wastes and soils from the river banks is the most significant source of PCB loading to the Kalamazoo River. A fish advisory has been in place since the 1970s.

The MDEQ completed a Site-wide Final (Revised) Human Health Risk Assessment (HHRA) and Baseline Ecological Risk Assessment (BERA) for OU5. The HHRA quantitatively assessed potential risk to human health for different exposure pathways, including the consumption of fish, direct contact with contaminated floodplain soils, and inhalation of dust and volatile emissions from floodplain soils behind the State-owned dams. The HHRA concluded the most significant exposure pathway is the consumption of fish from the river because fish bioaccumulate PCBs from exposure to PCB-contaminated material, surface water, and prey. Recreational activities, including swimming boating, and wading in the river, do not pose a health risk to people. The BERA concluded that sensitive consumers, such as mink, are the most at risk compared to other ecological receptors. Birds (represented by the American Robin) that consume a substantial amount of earthworms are also at significant risk if foraging takes place in the contaminated areas, and terrestrial mammals (represented by the red fox) may be at some risk if foraging is concentrated in river areas whose prey reside in contaminated areas and have taken up substantial amounts of PCBs.

Response Activities

U.S. EPA Time-Critical Removal Action

On February 27, 2007, Georgia-Pacific and Millennium Holdings, LLC signed an AOC with U.S. EPA and the State of Michigan to conduct a time-critical removal action in an area of the Kalamazoo River called the "Plainwell Impoundment." The removal action will result in excavation and off-site disposal of approximately 132,000 yds^3 of PCB-contaminated sediments, river banks, and floodplain soils. Much of the State of Michigan-owned Plainwell Dam will be dismantled, and the river will be re-routed back to its original pre-dam channel. Excavated river banks will be restored according to a restoration plan approved by federal and State natural resource trustees, using wherever possible soft engineering and native plant species to enhance the interaction between aquatic and terrestrial species at the Site. The removal action started in March 2007, and

as of September 2007, nearly 8,000 cubic yards of material have been removed from the river and nearby banks.

Basis for Taking Action

There is no basis for taking action at this time as the Supplemental RI/FS for OU5 has not been completed nor a ROD issued. The remedial status of OU5 is discussed below.

Remedial Status

On February 27, 2007, Georgia-Pacific Corporation and Millennium Holdings, LLC signed an AOC with U.S. EPA to conduct a Supplemental RI/FS investigation for the entire 80-mile stretch of the Kalamazoo River. U.S. EPA approved the supplemental RI Work Plan for the first reach of the Kalamazoo River, i.e. the Morrow Dam to Plainwell Dam reach. At the time of this five-year review, samples of river sediment and bank soil are being collected at specific locations along the river.

Since a ROD has not been issued for OU5, a remedial action cannot be discussed or evaluated; therefore, no further discussion of OU5 is contained in this five-year review report.

B.7. Operable Unit 7

Physical Characteristics

The former Plainwell Paper Mill OU7 is located in the city of Plainwell, Allegan County, Michigan (See Figure 11, OU7 Location Map). The 34-acre mill property is bordered by the Kalamazoo River to the north, the Plainwell central business district to the east, residential property to the south, and commercial properties and the city of Plainwell wastewater treatment plant to the west.

Land and Resource Use

Operable Unit 7 was formerly zoned industrial. In 2006, the city of Plainwell purchased the mill property and the mill property was rezoned as residential. Land use in the immediate vicinity of OU7 is characterized as industrial, commercial, and residential. A Restrictive Covenant running with the land from the former owner of the property to MDEQ (MDEQ Reference No: RC-RRD-201-05-001on USEPA Site No. 059B) is already in place (See Attachment 7, Restrictive Covenant for OU7). The U.S. EPA is a third-party beneficiary of this Restrictive Covenant, which was recorded with the Allegan County Registry of Deeds on March 25, 2005. The Restrictive Covenant provides, among other things, that owners of the mill property must take reasonable steps to stop any continuing release of hazardous substances, and may not use the property in a manner that causes existing contamination to migrate beyond the property's boundaries.

The Restrictive Covenant further provides that as response activities are performed at this property, MDEQ and U.S. EPA may require modifications to the covenant to assure the integrity and effectiveness of any selected remedial action.

History of Contamination

Between 1910 and 1962, various owners of the Plainwell Paper Mill obtained pulp through the de-inking and repulping of used paper. Polychlorinated biphenyls were introduced into the residuals as a result of the use of carbonless copy paper, which between approximately 1954 and 1971 contained PCBs. Wastewater from the de-inking operations was discharge directly to the Kalamazoo River until 1954, when a clarifier was installed adjacent to the mill and wastewater was treated by primarily clarification. The clarified effluent was discharged into the Kalamazoo River. The underflow from the clarifier was dewatered in a series of on-site lagoons. The secondary treatment system was updated in 1983 with the installation of a second clarifier

Typically, twice a year each lagoon was excavated and the material was taken to the 12th Street Landfill, located near the Plainwell Dam. The waste lagoons were taken out of service in 1983 when the second clarifier was installed. Four former waste lagoons are presently covered with soil and are well vegetated. Other lagoons were filled with soil after being cleaned out and are almost entirely located under the mill's present wastewater treatment facilities.

Response Activities

Weyerhaeuser is currently conducting an emergency response action under the terms of its Consent Decree, described below, to abate a potential release from the banks of the mill property. The emergency action only includes those activities made necessary as a result of the of the Plainwell dam removal. The activities include removal of sediments from the powerhouse channel and grading and armoring of bank to handle flow redirected by the Plainwell dam removal.

Basis for Taking Action

There is no basis for taking action at this time as the RI/FS for OU7 has not been completed nor a ROD issued. OU7 is in the RI/FS stage of the Superfund process. The remedial status of OU7 is discussed below.

Remedial Status

In December 2004, Weyerhaeuser signed a Consent Decree which, among other things, obligated the company to conduct the RI/FS and RD/RA for the Plainwell Mill property. In September 2006, Weyerhaeuser submitted an RI/FS Work Plan. After the completion of the emergency response, U.S. EPA will resume its review of the RI/FS Work Plan for the Mill Property. As noted above, effective ICs are

in place and were negotiated as part of the bankruptcy settlement with Plainwell Inc., a former owner of the property. Institutional controls will be reevaluated after the selection of the remedy for the mill property. U.S. EPA will ensure that long-term stewardship of OU7, as well as every other operable unit of the Site, includes implementation and maintenance of each component of the selected remedy, including any necessary ICs.

Since a ROD has not been issued for OU7, a remedial action cannot be discussed or evaluated; therefore, no further discussion of OU7 is contained in this five-year review report.

IV. Remedial Actions

Remedies were selected and RODs were issued for OU2, OU4, and OU3. Therefore, the following subsections describe the selected remedy, its implementation, institutional controls and system operations, where applicable, for these operable units.

A. Operable Unit 2

Remedy Selection

Remedial Action Objectives (RAOs) for the Willow Boulevard/A-Site Landfill OU2 were developed based upon the findings of the November 2004, RI and the human health risk evaluation in the RI. The RAOs for OU2 include:

- Eliminate exposure to PCB-contaminated material exceeding applicable land-use and/or risk based cleanup criteria;
- Prevent PCB migration, via erosion or surface water runoff, into the Kalamazoo River; and
- Mitigate, to the extent practicable, adverse effects to the environment due to implementation of a remedial action.

The OU2 ROD was signed on September 27, 2006. The remedy selected in the ROD includes:

- Excavation of PCB-contaminated residual, soil, and sediment from areas outside the landfill and consolidation of excavated material into the A-Site Landfill portion of OU2;
- Creating a clean buffer between the Kalamazoo River and the Willow Boulevard Landfill portion of OU2;

- Containment of residual waste material underneath a Part 201-landfill compliant cap;
- Installing a fence that encompasses the landfill to restrict access to the landfill;
- Implementing deed restrictions limiting future land use; and
- Long-term groundwater monitoring

Remedy Implementation

The U.S. EPA is in the process of negotiating a Consent Decree (CD) with Millennium Holdings and Georgia-Pacific for the implementation of the RD/RA at OU2.

Because a remedial action has not yet implemented, the remedy cannot be evaluated for protectiveness under the remaining sections of this five-year review report. Therefore, no further discussion of OU2 is provided.

B. Operable Unit 3

Remedy Selection

The RAOs for the King Highway Landfill OU3 were developed based upon the findings of the July 1994 and the human health risk evaluation in the RI. The RAOs identified in the September1994, Focused Feasibility Study include:

- Reduce the potential migration of PCBs to the Kalamazoo River that could result from erosion of residuals from behind the dike that physically separates the residuals from the river, or failure of the dike;
- Restrict the potential for PCB migration from leachate to groundwater;
- Restrict the potential transport of PCB-containing soil/residuals along the dike to the river in surface runoff or by erosion of soils/residuals due to river flows; and
- Restrict the potential contact with PCB-containing soil/residuals and surface water by workers and trespassers at the KHL.

The ROD for OU3 and the Georgia-Pacific Five Former Lagoons was signed by MDEQ in October 1997, and by U.S. EPA in February 1998. The remedy selected in the OU3 ROD includes:

- Excavation and consolidation of PCB-contaminated soils, sediments, and residuals from the landfill berms, the KSSS floodplain, the Georgia-Pacific Mill Lagoons, the river sediment adjacent to the KHL and containment of the excavated material into the KHL;

- Construction of a State of Michigan Part 115 landfill-compliant cap over the landfill;

- Erosion protection on the berms of the landfill designed to protect against a 100-year flood event;

- Installation of new groundwater monitoring wells and abandonment of wells that are no longer needed;

- Long-term groundwater and surface water monitoring;

- Implementing deed restrictions limiting future land use;

- Implementing access restrictions by enclosing the entire KHL and the Mill Lagoons (only during remediation) with a fence; and

- Placing a permanent marker at the KHL and posting warning signs at the entry gates and on the fence every 200 feet.

The purpose of the selected remedy at the King Highway Landfill OU3 and the Mill Lagoons is to prevent direct contact with PCB-contaminated residuals and eliminate or reduce the potential migration of PCBs from the landfill and the Mill Lagoons into the Kalamazoo River. The selected remedy addresses the principal threat posed by OU3 and the Mill Lagoons by reducing the current and potential migration of PCBs into the Kalamazoo River.

Cleanup goals for soil at OU3 and the Mill Lagoons were based on the anticipated future land use, which was expected to remain industrial. Both properties are zoned for industrial use therefore, the limited industrial cleanup criteria for soil established in Sections 20120(a) and 20121(b) of Part 201, Environmental Remediation, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, MCL 324.20101(0) *et seq.* (NREPA), were used. At the time the ROD was signed, the limited industrial cleanup criterion for PCBs in soil was 21 mg/kg PCB, but this standard was later reduced to 16 mg/kg PCB. The ROD required that all visible PCB-contaminated residual, soil, and sediment from the KSSS floodplain and the river adjacent to the landfill, be excavated and consolidated back into the landfill. The ROD did not impose numerical cleanup criteria for the KSSS floodplain and river adjacent to the landfill because these actions were considered an Interim Response Action. However, if the confirmatory sampling at the KSSS floodplain showed that a residential cleanup criterion

of 1 mg/kg PCB or lower had been achieved, then the action at the KSSS floodplain would be accepted as a final RA.

Remedy Implementation

On February 8, 2000, a Consent Order was signed by Georgia-Pacific and the State of Michigan, whereby Georgia-Pacific agreed to implement the remedy for the OU3 and the Georgia-Pacific Five Former Lagoons. In accordance with the Superfund Program Implementation Manual and as recorded in U.S. EPA Superfund Tracking System called "WasteLan," the remedial design start for OU3 is June 30, 1999 and the remedial design was completed on September 27, 2002. There were no difficulties or changes that occurred during the remedial design. Georgia-Pacific voluntarily started construction of the remedial action in 1996, before the ROD was issued and before the Consent Order was signed by the PRPs and the State of Michigan.

At the time the Consent Order was signed in February 2000, the landfill cap had already been constructed. The next on-site mobilization that occurred was on October 21, 2002, when the long-term monitoring well network was installed. Therefore, it is this date that is recorded in WasteLan as the start of the "on-site construction of the RA." The date of on-site construction of the RA is the date that "triggers" the five-year review requirement.

A Final Report for Completion of Construction for the King Highway Landfill OU3 and the Mill Lagoons was submitted to the MDEQ in May 2004 and a post-closure O&M Plan was submitted in June 2004. As of this five-year review, the MDEQ has not yet approved the Final Completion of Construction Report or the Final O&M Plan. The MDEQ approval of these documents is pending resolution of the MDOT and city of Kalamazoo property issues

Institutional Controls

Access restrictions and ICs are required by the ROD at the King Highway Landfill and the Mill Lagoons by the OU3 ROD. Institutional controls are required to ensure the protectiveness of the remedy. Institutional controls are non-engineered instruments, such as administrative and/or legal controls, that help minimize the potential for exposure to contamination and protect the integrity of the remedy. Compliance with ICs is required to assure long-term protectiveness for any areas which do not allow for unlimited use or unrestricted exposure.

Access restrictions at the King Highway Landfill are in place. A locked chain-link fence and sheet pile, where present, encloses the landfill and restricts public access to the landfill and potential for exposure to PCB-contaminated material. Warning signs are posted along the fence every 200 feet, and permanent markers will be posted on both ends of the landfill after deed restrictions on the site parcels are recorded with the Kalamazoo County Register of Deeds.

As noted above, U.S. EPA believes it is not appropriate to require deed restrictions at the Mill Lagoons at this time. The extent to which additional response activities will be required at the Georgia-Pacific Kalamazoo Mill property has yet to be determined by U.S. EPA and/or MDEQ. U.S. EPA has determined that it is more appropriate to place deed restrictions on the mill lagoons after a cleanup decision is made with regard to the entire Georgia-Pacific Kalamazoo Mill property.

Institutional controls at the properties comprising the King Highway Landfill are not yet in place. U.S. EPA requested and Georgia-Pacific agreed to conduct an IC study consisting of specific IC evaluation activities and submit to U.S. EPA an implementation work plan. On August 3, 2007, ARCADIS of New York, on behalf of Georgia-Pacific, notified U.S. EPA that it was in the process of conducting an IC study to evaluate whether all necessary ICs for OU3 had been identified and implemented. On September 17, 2007, ARCADIS submitted an IC Study Report and work plan to U.S. EPA and MDEQ. U.S. EPA and MDEQ are currently reviewing this report. U.S. EPA will develop an IC Plan for the KHL by April 2008, which is six months from the date of this first FYR. The IC Plan will incorporate the results of the final IC Study.

The table below summarizes institutional controls for these restricted areas.

Media, remedy components & areas that do not support UU/UE based on current conditions	***Objectives of IC***	***Title of Institutional Control Instrument Implemented***
Landfill – Capped Area	Prohibit use except maintenance and assure integrity of the landfill cap	Institutional controls are being evaluated
Groundwater – On Site	Prohibit groundwater use	Institutional controls are being evaluated
Other Remedial Action Components	Prohibit inconsistent uses and protect the integrity of the remedy components	Institutional controls are being evaluated

Maps (paper and GIS versions) which depict the current conditions of the site and areas which do not allow for UU/UE will be developed as part of the IC Plan discussed above.

Current Compliance

Access to the site is restricted by a fence. The gate to the site is intact and in good repair. No activities were observed that would have violated the objectives of the institutional controls. The cap and the surrounding area were in good repair; there were no signs of unauthorized access; and no new uses of groundwater were observed. Based on inspections and interviews, U.S. EPA is not aware of site or media uses which are inconsistent with the stated objectives of the ICs. The OU3

remedy appears to be functioning as intended.

Long-Term Stewardship

Long term protectiveness requires compliance with effective ICs. U.S. EPA will ensure that long-term stewardship of OU3, as well as every other operable unit of the Site, including implementation and maintenance of each component of the selected remedy and any ICs, in accordance with the long-term O&M Plan.

System Operations and O&M Costs

Operation and maintenance costs were estimated in the ROD to be $125,000 per year. The actual annual O&M cost is $250,000. These costs are mostly attributed to activities performed pursuant to the *Hydrogeologic Monitoring Plan* and the *Landfill Gas Monitoring Plan*, which was developed pursuant to the requirements of the AOC (developed years after the Focused Feasibility Study (FFS) and ROD). Some of the activities performed include water level measurements, ultra low-flow groundwater sampling, data analysis and evaluation, design of various landfill gas control devices, and regulatory reporting – none of which were contemplated as part of the development of the annual O&M cost estimate presented in the 1994 FFS. Actual costs of physical cap maintenance and repair are less than those estimated in the 1994 FFS, as there have not been any significant repair activities required thus far for the cap. A significant portion of the current annual O&M costs associated with on-site maintenance activities have been associated with the installation of several landfill gas control devices over the past several years.

C. Operable Unit 4

Remedy Selection

The RAOs for the 12th Street Landfill OU4 were developed based upon the findings of the RI and the human health risk evaluation in the RI. The RAOs identified in the July 1997 Focused Feasibility Study Report include:

- Reduce the potential migration of PCBs to the Kalamazoo River that could result from erosion of residuals;
- Reduce the potential migration of PCBs to the adjacent property and wetlands that could result from erosion of residuals;
- Restrict the potential for PCB migration from leachate to groundwater; and
- Restrict the potential contact with PCB-containing soil/residuals by any workers or trespassers at the site, or any anglers along the river.

The ROD for OU4 was signed on September 28, 2001. The OU4 ROD requires the cleanup of the 12th Street Landfill and four areas adjacent to the landfill into which PCBs have migrated including: the woodland area, wetlands, adjacent property, and the former powerhouse channel.

The remedy selected in the 12th St.-OU ROD includes:

- Excavation of PCB-contaminated residual, soil, and sediment from areas adjacent to the landfill and consolidation of the excavated material back into the landfill;
- Creating a hydraulic barrier between the east side of the landfill along the former powerhouse discharge channel;
- Restoration of areas that are excavated, cleared and grubbed, or otherwise affected by the remedial action;
- Construction of a side wall containment system around the outside of the landfill that provides side slope stability, 500-year event flood protection, and erosion control;
- Construction of a cover (cap) over the landfill that consists of , from bottom up, a six-inch thick granular fill layer, 30-mil thick geomembrane liner, 24-inches thick general fill layer, and a six-inch thick vegetative layer;
- Installation of a groundwater monitoring network and abandonment of wells no longer in use;
- Long-term groundwater monitoring and during excavation activities, short-term surface water monitoring;
- Deed restrictions to restrict future land use; and
- Access restrictions including constructing a fence surrounding the landfill with warning signs and permanent markers posted along the fence.

Remedy Implementation

The Consent Decree for RD/RA work addresses the 12th Street Landfill OU4 and also requires a RI/FS investigation and RD/RA implementation at the former Plainwell Mill property (OU7). The Consent Decree for RD/RA was signed by U.S. EPA on December 20, 2004, and entered by the U.S. District Court on February 15, 2005. However, at the request of U.S. EPA, the start of the remedial design phase of the remedy was put on hold pending the outcome of settlement negotiations for the Site. Settlement negotiations

ended on February 27, 2007. In May 2007, U.S. EPA notified Weyerhaeuser to begin the design phase of the 12th Street Landfill remedy and to initiate the RI at the former Plainwell Mill Property OU7.

Currently, Weyerhaeuser is performing an emergency response at OU4 in accordance with the Consent Decree in anticipation of the future removal of the Plainwell Dam. The Plainwell Dam is located just upstream and adjacent to the landfill. Some of the activities Weyerhaeuser is performing include removal of contaminated sediments in the adjacent powerhouse channel and grading and armoring of the riverbanks along the Kalamazoo River adjacent to the 12th Street Landfill. The work being conducted by Weyerhaeuser represents a portion of the work associated with implementation of the remedial action that was selected in the ROD. The remaining components of the selected remedial action will be developed during the remedial design phase of the remedy.

Institutional Controls

Access restrictions are inadequate at the 12th St. Landfill OU4. A chain-link fence was installed on the south side of the landfill and warning signs were posted. However, there is no fence on the north, east, and west sides of the landfill and access to the landfill is easily accessible by the public.

The table below summarizes institutional controls for the restricted areas.

Media, remedy components & areas that do not support UU/UE based on current conditions	***Objectives of IC***	***Title of Institutional Control Instrument Implemented***
Groundwater – On Site	Prohibit groundwater use if necessary	Existing ICs will be evaluated as part of the Remedial Design
Other Remedial Action Components	Prohibit Inconsistent Uses and protect the integrity of the remedy components	Existing ICs will be evaluated as part of the Remedial Design

As noted above, a Restrictive Covenant is already in place to restrict future use of the landfill property. The Restrictive Covenant prohibits any excavation that would interfere with the landfill cap to be installed at this OU. The Agency believes that the remedial design should include an evaluation of (1) whether and to what extent groundwater use at the landfill should be restricted; and (2) the effectiveness of the existing Restrictive Covenant to appropriately restrict groundwater use at OU4. This evaluation will be made during remedial design phase of the OU4 remedy.

At the time of this five year review, the landfill continues to be owned by Plainwell Inc., which is liquidating all assets through a bankruptcy proceeding. The Agency is aware

that Weyerhaeuser intends to acquire ownership of the landfill through the bankruptcy proceedings. Weyerhaeuser recently informed U.S. EPA that its acquisition of the title to the landfill is almost complete. After Weyerhaeuser acquires ownership, the company will be in a position to modify the Restrictive Covenant, if necessary. The Agency will request Weyerhaeuser to evaluate whether groundwater use at OU4 should be restricted, and the effectiveness of existing ICs to appropriately restrict groundwater use, as part of its remedial design of the landfill within 6 months of the date of this FYR.

Current Compliance

The remedy is not constructed and access restrictions are inadequate to protect trespassers from short-term risks associated with remedy construction. A fence needs to be constructed to prevent access and possibly other measures employed to prevent exposures until the full remedy can be implemented.

Long-Term Stewardship

Compliance with effective ICs is required to assure long-term protectiveness. The Agency will ensure that long-term stewardship of OU4, as well as every other operable unit of the Site, includes implementation and maintenance of each component of the selected remedy, including any necessary ICs. Along with implementation of effective ICs, assurance plans (such as the O&M plan) must be developed to assure proper maintenance and monitoring of effective ICs. The plan would include regular inspection of ICs at the site and annual certification to U.S. EPA that ICs are in place and effective.

Systems Operations/O&M

The remedy is under construction. Therefore, operating procedures and O&M costs can not be evaluated. The CD requires that a draft O&M Plan be submitted to U.S. EPA with the Remedial Design Work Plan.

V. Progress Since the Last Review

This is the first five-year review for the Allied Paper, Inc./Portage Creek/ Kalamazoo River Site.

VI. Five-Year Review Process

Administrative Components of the Five-Year Review Process

The U.S. EPA Remedial Project Manager (RPM), Shari Kolak, notified the MDEQ and Georgia-Pacific of the start of the Five-Year Review in a letter dated June 8, 2007. The U.S. EPA RPM headed the Five-Year Review Team and was assisted by the MDEQ Project Manager, Keith Krawczyk.

The review schedule included the following components:

Community Notification
Document Review
Data Review
Site Inspection
Five-Year Review Report Development and Review.

Community Notification and Involvement

In June 2007, the U.S. EPA Office of Public Affairs placed an ad in two local newspapers announcing that the Five-Year Review was in progress and requested that any interested parties contact the U.S.EPA RPM or the U.S. EPA Community Involvement Coordinator for additional information. Copies of the newspaper notice are included in Appendix A. Since the announcement notice has been issued, no member of the community has notified the U.S. EPA of any interest in the Five-Year Review.

Document Review

This Five-Year Review consisted of a review of relevant documents including the following:

For the Willow Boulevard/A-Site Landfill OU2:

- Remedial Investigation/Focused Feasibility Study Report, Willow Boulevard/A-Site Landfill Operable Unit 2, Kalamazoo, Michigan, Allied Paper, Inc., Portage Creek, Kalamazoo River Superfund Site, November 2004;

- Record of Decision for the Willow Boulevard/A-Site Landfill OU2 of the Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site, City of Kalamazoo, Michigan, September 2006;

- Final (Revised) Baseline Ecological Risk Assessment for the Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site, April 2003; and

- Final (Revised) Baseline Human Health Risk Assessment for the Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site, May 2003.

For the King Highway Landfill OU3:

- Record of Decision for the King Highway Landfill Operable Unit 3 of the Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site, City of Kalamazoo, Michigan, February 1998;

- Final Report for Completion of Construction Volume 1 of 9, King Highway Landfill

Operable Unit 3 and Five Former Georgia-Pacific Lagoons, May 2004;

- Consent Decree for the Design and Implementation Of Certain Response Action At Operable Unit #4 and the Plainwell Inc. Mill Property of the Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site, February 15, 2005;

- Administrative Order by Consent for Response Activity at the King Highway Landfill-OU3, MDEQ Reference No. AOC-ERD-99-010, February 2000;

- Remedial Investigation Report, King Highway Landfill Operable Unit, July 1994;

- Post-Closure Operation and Maintenance Plan, King Highway Landfill Operable Unit of the Allied Paper, Inc/Portage Creek/Kalamazoo River Superfund Site, draft Final June 2004;

- Appendix J to the Final Report for Completion of Construction, King Highway Landfill Operable Unit 3 and Five Former Georgia-Pacific Lagoons, May 2004;

- Landfill Gas Monitoring Plan, King Highway Landfill Operable Unit, June 2002;

- Risk Assessment, King Highway Landfill Operable Unit, Allied Paper, Inc/Portage Creek/Kalamazoo River Superfund Site, August 1994;

- Technical Memorandum 6, King Highway Landfill Operable Unit, Allied Paper, Inc/Portage Creek/Kalamazoo River Superfund Site, March 1994; and

- Institutional Study Report, King Highway Landfill Operable Unit 3 and Five Former Georgia-Pacific Corporation Mill Lagoons, September 2007.

For the 12th Street Landfill OU4:

- Consent Decree for the Design and Implementation Of Certain Response Action At Operable Unit #4 And The Plainwell Inc. Mill Property Of The Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site, December 2004;
- Record of Decision for the 12th Street Landfill Operable Unit 4 of the Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site, City of Kalamazoo, Michigan, September 2001; and

- Remedial Investigation/Feasibility Study Technical Memorandum 8, 12th Street Landfill Operable Unit, Plainwell, Michigan, Allied Paper, Inc., Portage Creek, Kalamazoo River Superfund Site, May 31, 1994.

Data Review

Data from the following documents were reviewed and discussed in this five-year review report:

- King Highway Landfill Operable Unit Hydrogeological Monitoring Plan, Final September 2002;
- Attachment B, 1998 Groundwater Monitoring Reports, King Highway Landfill Operable Unit Hydrogeological Monitoring Plan;
- Attachment C, 2001 Groundwater Monitoring Reports, King Highway Landfill Operable Unit Hydrogeological Monitoring Plan;
- Attachment F to the 1998 King Highway Landfill Operable Unit Hydrogeological Monitoring Plan, Draft July 1998;
- Post-Closure Groundwater Sampling Analytical Results from 1993-2007, for the King Highway Landfill Operable Unit 3 of the Allied Paper Inc./Portage Creek/Kalamazoo River Superfund Site, transmitted via e-mail on September 10, 2007, by Pat McQuire with Georgia-Pacific;
- Draft Final King Highway Landfill Operable Unit 3 and Five Former Georgia-Pacific Lagoons, Final Report for Completion of Construction, September 2003;
- Final (Revised) Baseline Ecological Risk Assessment for the Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site, April 2003; and
- Final (Revised) Baseline Human Health Risk Assessment for the Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site, May 2003.

Site Inspection

King Highway Landfill OU3

The Five-Year Review site inspection of the KKL-OU3 was conducted on August 1, 2007. The site inspection team included Shari Kolak from U.S. EPA; Keith Krawczyk from the MDEQ; Mark Brown and L. Chase Fortenberry from Georgia-Pacific; and Michael Hassett from ARCADIS BBL. Site Inspection Photos and the Site Inspection Report are can be found in Attachments 3 and 4, respectively.

At the time of the inspection, weather conditions were sunny with an air temperature of 85 degrees Fahrenheit. The activities conducted during the inspection included a walk through the site to assess the physical integrity of the components of the remedy, including the landfill cap, groundwater monitoring wells, gas vents, security fence, etc.

The landfill cap was found to be in good condition. The vegetative cover had a few distressed areas due to the lack of precipitation during August. The cap appears to be well maintained with no noticeable depressions, cracks, odors, or erosion. However, there was evidence of animals burrowing into the cap. The rodent burrows appeared to be relatively shallow and no waste or geosynthetic was observed. During the site inspection, the MDEQ representative indicated that Georgia-Pacific is timely in repairing any animal burrows that were observed in the past. On September 21, 2007, ARACAS, the contractor for Georgia-Pacific, submitted the August 2007 Monthly Progress Report for the Site. The report indicated that, on August 25, 2007, the vegetative cover was repaired by filling in the animal burrows.

Groundwater wells were in good condition and properly secured. Gas Monitoring probes and passive gas vents were also in good condition, properly secured, and functioning properly. A locked, chain-link fence surrounds the landfill and effectively restricts public access to the landfill. At the time of the inspection, warning signs were posted every 200 feet on the fence, with the exception of the western perimeter of the landfill adjacent to the scrap yard. Shortly after the inspection, ARCADIS, the contractor for the PRP, notified U.S. EPA that additional warning signs were ordered, and the signs will be installed upon receipt, which is anticipated for the week of August 20, 2007. According to the September 17, 2007, IC Study Report, warning signs were posted along the fence at the west end of the landfill on August 25, 2007. Although not required at this time, permanent markers will be posted on each side of the property at the time the Restrictive Covenant is recorded with the city of Kalamazoo registry of deeds.

Interviews

Interviews were conducted with on-site personal and MDEQ staff during the August 1, 2007 site inspection. The following persons were interviewed: Michael Hassett, the project engineer with ARCADIS BBL; Keith Krawczyk, the MDEQ project manager; and representatives from Georgia-Pacific including, Chase Fortenberry and Mark Brown. A phone interview was conducted with Steve Taplin, the O&M Site Manager with Terra Contracting (See Attachment 5, Phone Interview Record).

King Highway Landfill OU3

The MDEQ project manager is satisfied with the O&M Manager's responsiveness in addressing problems as they arise, including bare spots and stressed vegetation in the landfill cap, burrowing animals, or odors from gas vents. The MDEQ project manager is also satisfied with the overall operation and maintenance of the OU3 remedy. No interviews with the public were conducted or necessary during the Five-Year Review period as the community interest at the King Highway Landfill OU3 is minimal.

12th Street Landfill OU4:

The 12th Street Landfill was not inspected during this five-year review because the construction of remedy recently began. The Agency is overseeing Weyerhaeuser's excavation activities

during the emergency response action currently being conducted in preparation of removal of the Plainwell Dam. For purposes of this five-year review, the U.S. EPA Remedial Project Manager, Michael Berkhoff and the MDEQ Project Manager, Keith Krawczyk were consulted to obtain site-related information.

VII. Technical Assessment

A. Operable Unit 3

Question A: Is the remedy functioning as intended by the decision documents?

Yes. The landfill remedy (capping and containment) is operating and functioning as intended by the ROD and the Consent Order. The landfill cap is in good condition and prevents PCB-contaminated material in the landfill from migrating, via erosion or surface water runoff, into the Kalamazoo River. The cap is also an effective barrier that prevents exposure, via direct contact, to the contaminated material by on-site workers, trespassers, and anglers. The cap also minimizes infiltration of rainwater and reduces the potential for leachate generation and, consequently, the migration of PCBs in groundwater into the Kalamazoo River. PCBs were not detected in groundwater above the performance standard, which is an indication that the cap is effective at containing the contaminated paper residuals.

Access restrictions are in place and prevent exposure to the contaminated material. The locked chain-link fence and sheet piling, where present, restricts public access to the landfill via Route M-89 and via the Kalamazoo River. Warning signs are posted every 200 feet along the perimeter fence notifying the public that the area is hazardous due to the buried paper-making residuals. Although not required at the time of this FYR, permanent markers will be posted on all entry gates at the time ICs are recorded with the city of Kalamazoo registry of deeds.

Institutional controls are not yet in place. Georgia-Pacific conducted an evaluation of existing ICs at OU3 and submitted an IC Study Report to U.S. EPA and MDEQ on September 17, 2007. The U.S. EPA and MDEQ are currently reviewing this report. Although ICs are not yet in place, the objectives of the ICs are being met; the public is not directly exposed to PCB-contaminated residuals or to PCBs via groundwater. The landfill property is zoned industrial and will remain industrial in the future via local zoning ordinances and the anticipated deed restrictions. Groundwater at the landfill property is not used for any purpose; therefore, there are no exposure pathways to on-site workers or the public from groundwater. All immediate threats have been addressed and no additional actions, other than the recommended actions identified in Table 4 of this five-year review. U.S. EPA will develop an IC Plan within six months of this five-year review to assure the remedy continues to function as intended with regard to the ICs.

Question B: Are the exposure assumptions, toxicity data, cleanup levels, and remedial action objectives (RAOs) used at the time of remedy selection still valid?

Yes, except that since the date of the Consent Order implementing the ROD, the Michigan cleanup standard for PCBs in soil has become less stringent. The exposure assumptions, toxicity

data, risk assessment methods, and RAOs at the time of the ROD are still valid. However, when the ROD was issued, the State of Michigan Part 201 limited industrial cleanup criterion for PCBs in soil was 21 mg/kg and when the Consent Order for RD/RA was signed, the industrial cleanup criterion for direct contact with PCBs in soil was 9.9 mg/kg. Today, the PCB industrial land use criteria is 16 mg/kg for PCBs in soil. The landfill and the Mill Lagoons were remediated to achieve the industrial land use criterion of 9.9 mg/kg as specified in the Consent Order. Because the landfill and Mill Lagoons were remediated to a level that is below today's standards, the change in cleanup levels has no effect on the protectiveness of the OU3 remedy. The remedy is progressing as expected and is achieving the RAOs.

Question C: Has any other information come to light that could call into question the protectiveness of the remedy?

No. No additional information has been identified that would call into question the protectiveness of the remedy. However, property ownership issues with respect to the city of Kalamazoo and MDOT properties need to be resolved and the methane gas to the south of the landfill will need to be mitigated for the remedy to be protective in the long-term.

B. Operable Unit 4

Question A: Is the remedy functioning as intended by the decision documents?

No. The remedy has not yet been constructed, so is not functioning as intended by the decision document. Although ICs are in place, engineered access restrictions are inadequate to protect trespassers from short-term risks associated with remedy construction. The U.S. EPA has notified Weyerhaeuser of the requirement to enclose the landfill with a fence to prevent public access until the full remedy can be implemented.

Question B: Are the exposure assumptions, toxicity data, cleanup levels, and remedial action objectives (RAOs) used at the time of remedy selection still valid?

Yes. Although the State of Michigan Part 201 Industrial cleanup standard for soil has changed, the OU4 ROD did not specify cleanup numbers for industrial soils. Instead, the ROD merely stated that "site cleanup criteria pursuant to Part 201, Environmental Remedial of the NREPA" shall be used.

Question C: Has any other information come to light that could call into question the protectiveness of the remedy?

No. The remedy is not protective because the construction of the remedy is not complete and because access controls are inadequate to protect trespassers.

VIII. Issues

The tables in this section highlight the issues identified during the site inspection at OU3 and for

OU4, based upon document reviews and discussions with the MDEQ project manager.

Issues identified at King Highway Landfill OU3

Some of the landfill remedy components were built on properties that are not owned by Georgia-Pacific. These properties are located within the Site security fence, but are owned by MDOT and the city of Kalamazoo. According to the September 17, 2007 IC Study Report, Georgia-Pacific is in the process of acquiring ownership of the MDOT and city of Kalamazoo properties. Although Georgia-Pacific is in the process of acquiring this property, the KHL remedy is not protective in the long-term until ICs are in place at the landfill property owned by Georgia-Pacific, and the MDOT and city of Kalamazoo properties. In addition, the MDEQ will not approve the Final Completion of Construction Report and the Final O&M Plan until the property ownership issues are resolved. In accordance with the administrative agreement between Georgia-Pacific and MDEQ, until these reports are approved, the MDEQ cannot issue a Certification of Completion of Construction for the landfill and without this certification, appropriate restrictive covenants cannot be recorded with the Kalamazoo County Register of Deeds.

Finally, samples collected as part of the gas monitoring program indicate that methane gas has migrated off-site along the south end of the landfill, and that methane is present at concentrations that exceed threshold criteria. In July 2006, Georgia-Pacific submitted a Work Plan and implementation schedule to MDEQ for the installation of an additional cutoff trench to mitigate the methane gas. During the August 1, 2007, Site inspection, the MDEQ informed Georgia-Pacific that it believes additional controls are necessary to mitigate the methane gas to the south of the landfill. A landfill gas mitigation plan will need to be submitted to MDEQ that will satisfy its concerns about the off-site migration of methane gas at the south end of the landfill.

Table 2: Issues identified at OU3

Issues	Affects Current Protectiveness (Y/N)	Affects Future Protectiveness (Y/N)
Institutional controls are not in place at the landfill property, including the parcels currently owned by MDOT and city of Kalamazoo which are located within the site security fence. The remedy is not protective until effective ICs are placed on all site properties and are monitored and maintained.	N	Y
The MDEQ will not approve the Final Completion of Construction Report and the Final O&M Plan until the MDOT and city of Kalamazoo property ownership issues are resolved. Until these reports are approved, the MDEQ cannot issue a Certification of Completion of Construction for the landfill and without this certification, under the terms of the agreement between MDEQ and Georgia-Pacific, the appropriate restrictive covenants cannot be recorded with the Kalamazoo County Register of Deeds.	N	Y
Methane gas has migrated off-site in concentrations that exceed threshold criteria and will need to be mitigated.	Y	Y

Issues identified at 12th Street Landfill OU4

Access controls are inadequate. In particular, a chain-link fence was installed along the south side of the landfill but not on the north, east, and west sides of the landfill. Trespassers can freely enter the property and be exposed to PCB-contaminated material during the on-going construction activities. Also, it is not clear whether groundwater use restrictions are necessary and, if so, whether the existing ICs appropriately restrict use of groundwater at the landfill property.

Table 3: Issues identified at OU4

Issues	Affects Current Protectiveness (Y/N)	Affects Future Protectiveness (Y/N)
Access controls are inadequate. A chain-link fence was installed along the south side of the landfill but there is no fence along the north, east, and west sides of the landfill. Trespassers can freely enter the property and may be exposed to contaminated material.	Y	Y
It is unclear whether groundwater use should be restricted and, if so, whether existing ICs appropriately restrict use of groundwater within the landfill property	N	Y

IX. Recommendations and Follow-up Actions

The recommended follow-up actions for the issues identified in Section VIII are discussed in the table below.

Table 4: Recommendations and Follow-up Actions for OU3

Issue	Recommendations and Follow-up Actions	Party Responsible	Oversight Agency	Milestone Date	Affects Protectiveness (Y/N)	
					Current	Future
Institutional Controls	Submit a schedule or plan to U.S. EPA and MDEQ for 1) resolving property ownership issues with respect to the MDOT and city of Kalamazoo properties and 2) for implementing ICs at the landfill and MDOT and city of Kalamazoo properties.	PRP	U.S. EPA and MDEQ	November 15, 2007	N	Y

Issue	Recommendations and Follow-up Actions	Party Responsible	Oversight Agency	Milestone Date	Affects Protectiveness (Y/N)	
					Current	Future
	An Institutional Control Plan will be prepared documenting the IC evaluation activities and necessary corrective measures. The IC plan is necessary to evaluate what ICs are necessary and develop a schedule for their implantation. The IC plan will also evaluate how to ensure long-term stewardship of the OU and long-term protectiveness of the remedy.	U.S. EPA	U.S. EPA and MDEQ	6 months of date of the five-year review	N	Y
Excessive Landfill Gas Generation	Submit a landfill gas mitigation plan to MDEQ that will satisfy its concerns about the off-site mitigation of methane gas at the south end of the landfill.	PRP	MDEQ	November 2007	Y	Y

Table 5: Recommendations and Follow-up Actions for OU4

Issue	Recommendations and Follow-up Actions	Party Responsible	Oversight Agency	Milestone Date	Affects Protectiveness (Y/N)	
					Current	Future
Site Access	Install a chain-link fence on the north, east, and west sides of the landfill; post warning signs every 200 feet along the fence and on all entry gates; and place permanent markers around the boundary of the landfill describing the restricted area and the nature of the restrictions, per Section II.6 of the Statement of work attached to the February 2005 Consent Decree	PRP	EPA	December 2007	Y	Y

Issue	Recommendations and Follow-up Actions	Party Responsible	Oversight Agency	Milestone Date	Affects Protectiveness (Y/N)	
					Current	Future
Institutional Controls	Evaluate whether groundwater use should be restricted and, if so, amend existing ICs as necessary to ensure that appropriate groundwater use restrictions are implemented	PRP	U.S. EPA	April 2008	N	Y

X. Protectiveness Statements

The remedy at OU3 currently protects human health and the environment in the short-term. The landfill cap is in good condition and prevents PCB-contaminated material in the landfill from migrating, via erosion or surface water runoff, into the Kalamazoo River. The cap is also an effective barrier that prevents exposure, via direct contact, to the contaminated material by on-site workers, trespassers, and anglers. The cap also minimizes infiltration of rainwater and reduces the potential for leachate generation and the potential for PCBs in groundwater to migrate into the Kalamazoo River. Public access to the landfill is restricted by a locked chain-link fence and sheet pile, where present, and prevents people from being exposed to the contaminated material. Institutional controls are not yet in place. However, in order for the remedy to be protective in the long-term, the following actions will need to be taken: (1) submit a schedule or plan to U.S. EPA and MDEQ for resolving ownership issues with respect to the MDOT and city of Kalamazoo properties and for implementing ICs at the landfill and MDOT and city of Kalamazoo properties; and (2) submit a landfill gas mitigation plan to MDEQ that will satisfy its concerns about the off-site migration of methane gas at the south end of the landfill. Long-term protectiveness requires compliance with effective ICs. U.S. EPA will ensure that long-term stewardship of OU3, as well as every other operable unit of the Site, includes implementation and maintenance of each component of the selected remedy, including any necessary ICs.

The remedy at the 12th Street Landfill OU4 is not protective because the remedy has not yet been constructed and because access controls are inadequate to protect trespassers from short-term risks associated with remedy construction. A chain-link fence is installed along the west side of the landfill but not on the east, north, and south sides of the landfill and trespassers can easily gain access to the landfill. A chain-link fence will need to be installed on all sides of the landfill to prevent public access to the property and prevent trespassers from being exposed to PCB-contaminated material during the on-going construction activities. Long-term protectiveness requires compliance with existing ICs. Although ICs are in place, an evaluation is necessary of whether groundwater use at the landfill needs to be restricted and, if so, whether existing ICs appropriately restrict or prevent groundwater use at the landfill property. This evaluation will be made during the remedial design phase of the remedy. U.S. EPA will ensure that long-term

stewardship of OU4, as well as every other operable unit of the Site, includes implementation and maintenance of each component of the selected remedy, including any necessary ICs.

XI. Next Review

The next five-year review for Allied Paper, Inc./Portage Creek/Kalamazoo River Site is required by October 2012, five years from the signature date of this review.

Attachments

Attachment 1: Site Maps (Figures 1- 11)
Attachment 2: Post-Closure Monitoring Groundwater Sample Results, 1993-2007
Attachment 3: Photos Documenting Site Conditions
Attachment 4: Site Inspection Report for OU3
Attachment 5: Phone Interview Record
Attachment 6: Restrictive Covenant for OU4
Attachment 7: Restrictive Covenant for OU7

Appendices

Appendix A: Copy of Newspaper Public Notice

Attachment 1

Site Maps (Figures 1-11)

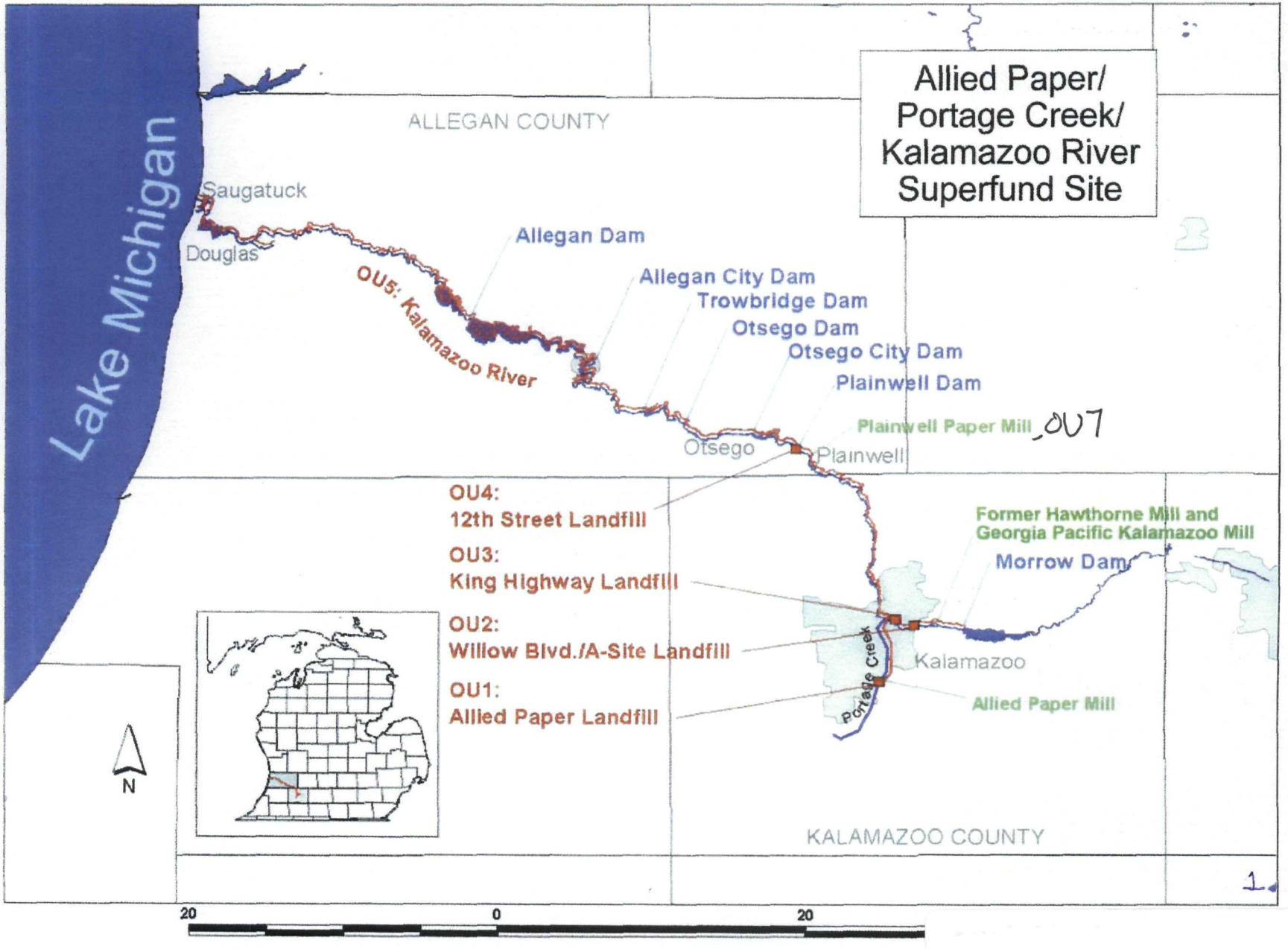
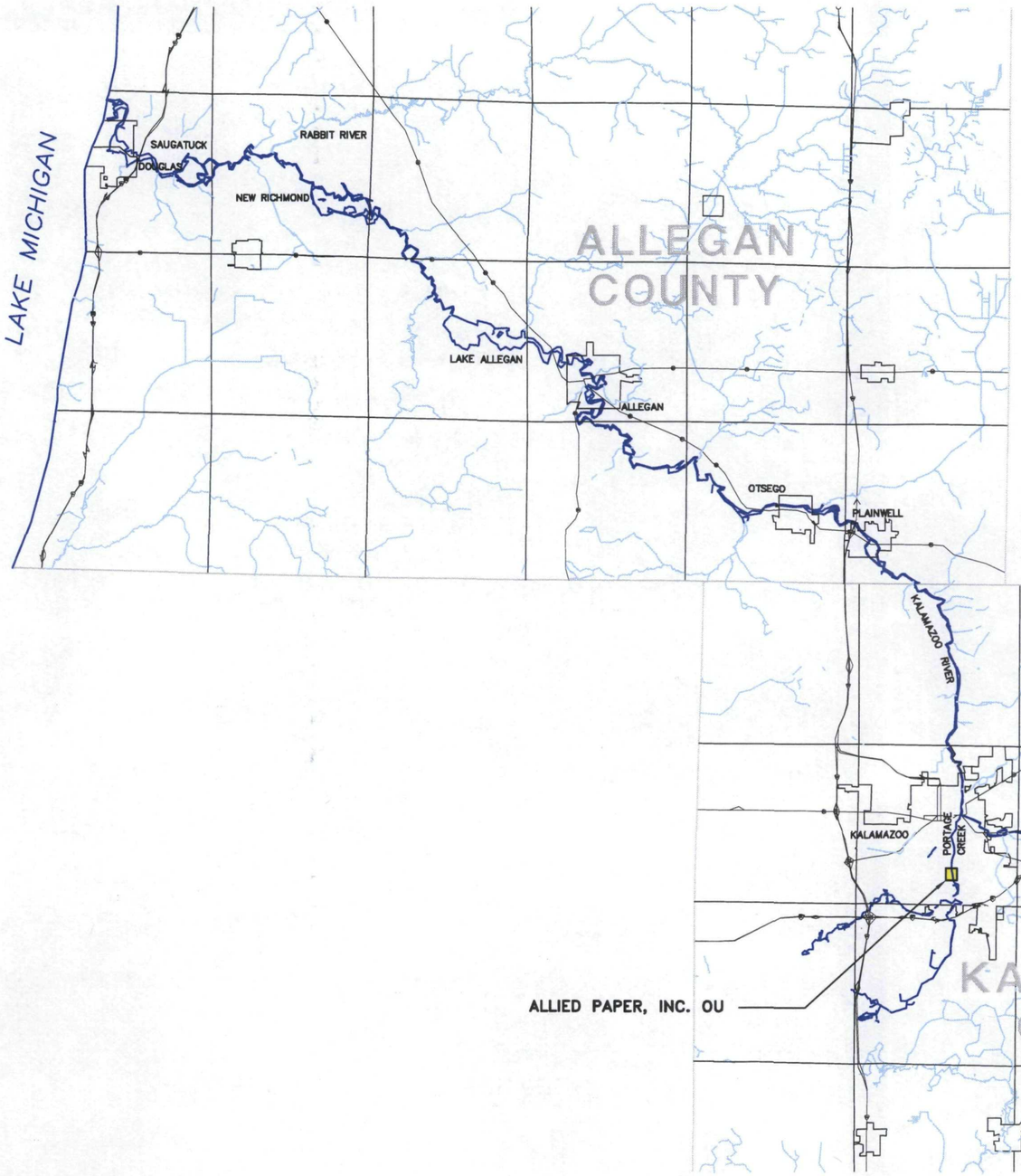
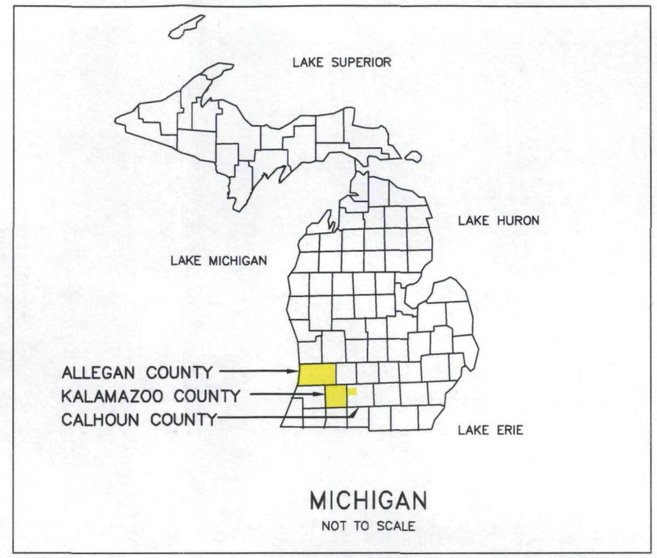


FIGURE 1 - Site Location Map

DRAFT
FOR STATE REVIEW





NOTE:

ALLEGAN, KALAMAZOO AND CALHOUN COUNTY MAPPING OBTAINED FROM MICHIGAN RESOURCE INFORMATION SYSTEM.

0 5 MILES 10 MILES

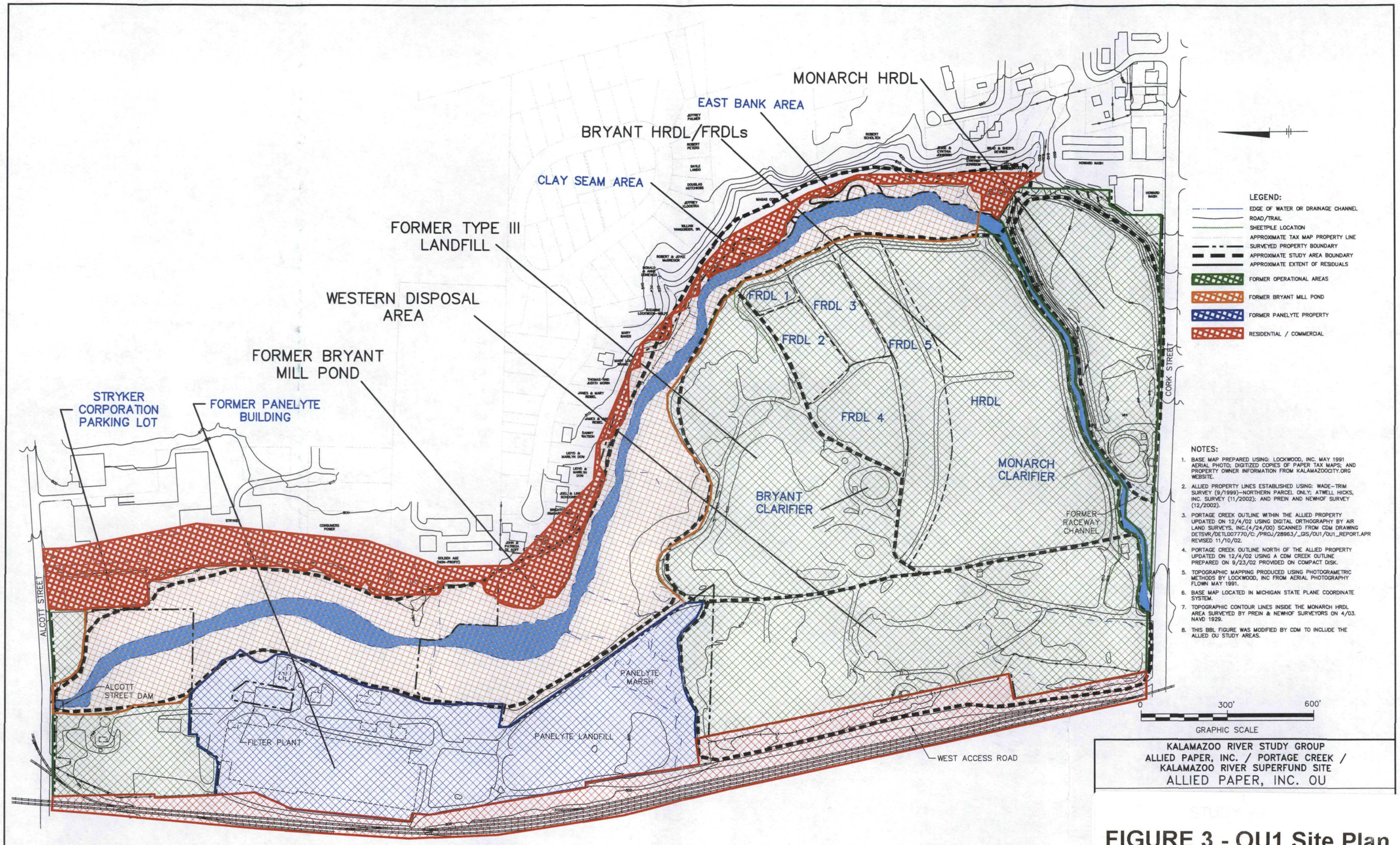
GRAPHIC SCALE

KALAMAZOO RIVER STUDY GROUP
ALLIED PAPER, INC. / PORTAGE CREEK /
KALAMAZOO RIVER SUPERFUND SITE
ALLIED PAPER, INC. OU

SITE LOCATION

FIGURE 2 - OU1 Location Map

X: (NONE)
L: ON= * OFF= REF*
P: PAGESET/PLT-BL
12/15/03 SYR-54-RLP PGL RCA
64560007/RIREPORT/64551SM1.DWG



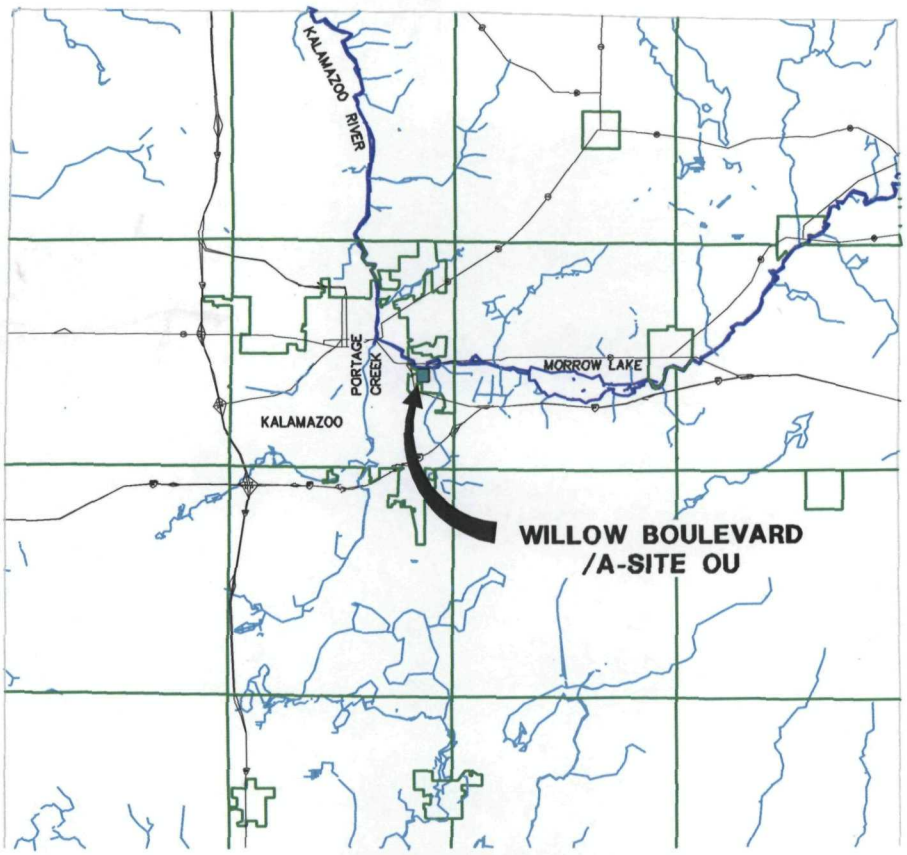
NOTES:

1. BASE MAP PREPARED USING: LOCKWOOD, INC. MAY 1991 AERIAL PHOTO; DIGITIZED COPIES OF PAPER TAX MAPS; AND PROPERTY OWNER INFORMATION FROM KALAMAZOOCITY.ORG WEBSITE.
2. ALLIED PROPERTY LINES ESTABLISHED USING: WADE-TRIM SURVEY (9/1999)-NORTHERN PARCEL ONLY; ATWELL HICKS, INC. SURVEY (11/2002); AND PREIN AND NEWHOF SURVEY (12/2002).
3. PORTAGE CREEK OUTLINE WITHIN THE ALLIED PROPERTY UPDATED ON 12/4/02 USING DIGITAL ORTHOGRAPHY BY AIR LAND SURVEYS, INC.(4/24/00) SCANNED FROM CDM DRAWING DETSVR/DETL007770/C: /PROJ/28963/_GIS/OU1/OU1_REPORT.APR REVISED 11/10/02.
4. PORTAGE CREEK OUTLINE NORTH OF THE ALLIED PROPERTY UPDATED ON 12/4/02 USING A CDM CREEK OUTLINE PREPARED ON 9/23/02 PROVIDED ON COMPACT DISK.
5. TOPOGRAPHIC MAPPING PRODUCED USING PHOTOGRAMETRIC METHODS BY LOCKWOOD, INC FROM AERIAL PHOTOGRAPHY FLOWN MAY 1991.
6. BASE MAP LOCATED IN MICHIGAN STATE PLANE COORDINATE SYSTEM.
7. TOPOGRAPHIC CONTOUR LINES INSIDE THE MONARCH HRDL AREA SURVEYED BY PREIN & NEWHOF SURVEYORS ON 4/03. NAVD 1929.
8. THIS BBL FIGURE WAS MODIFIED BY CDM TO INCLUDE THE ALLIED OU STUDY AREAS.

KALAMAZOO RIVER STUDY GROUP
ALLIED PAPER, INC. / PORTAGE CREEK / KALAMAZOO RIVER SUPERFUND SITE
ALLIED PAPER, INC. OU

FIGURE 3 - OU1 Site Plan

X: 64560X03, X0B.DWG
L: ON= * OFF= REF*
P: PAGESET/PLT-DL
12/17/03 54-RCB RCA
64560007/RIREPORT/64560T02.DWG



KALAMAZOO COUNTY

SCALE

NOTE:

KALAMAZOO COUNTY MAPPING OBTAINED FROM MICHIGAN RESOURCE INFORMATION SYSTEM.

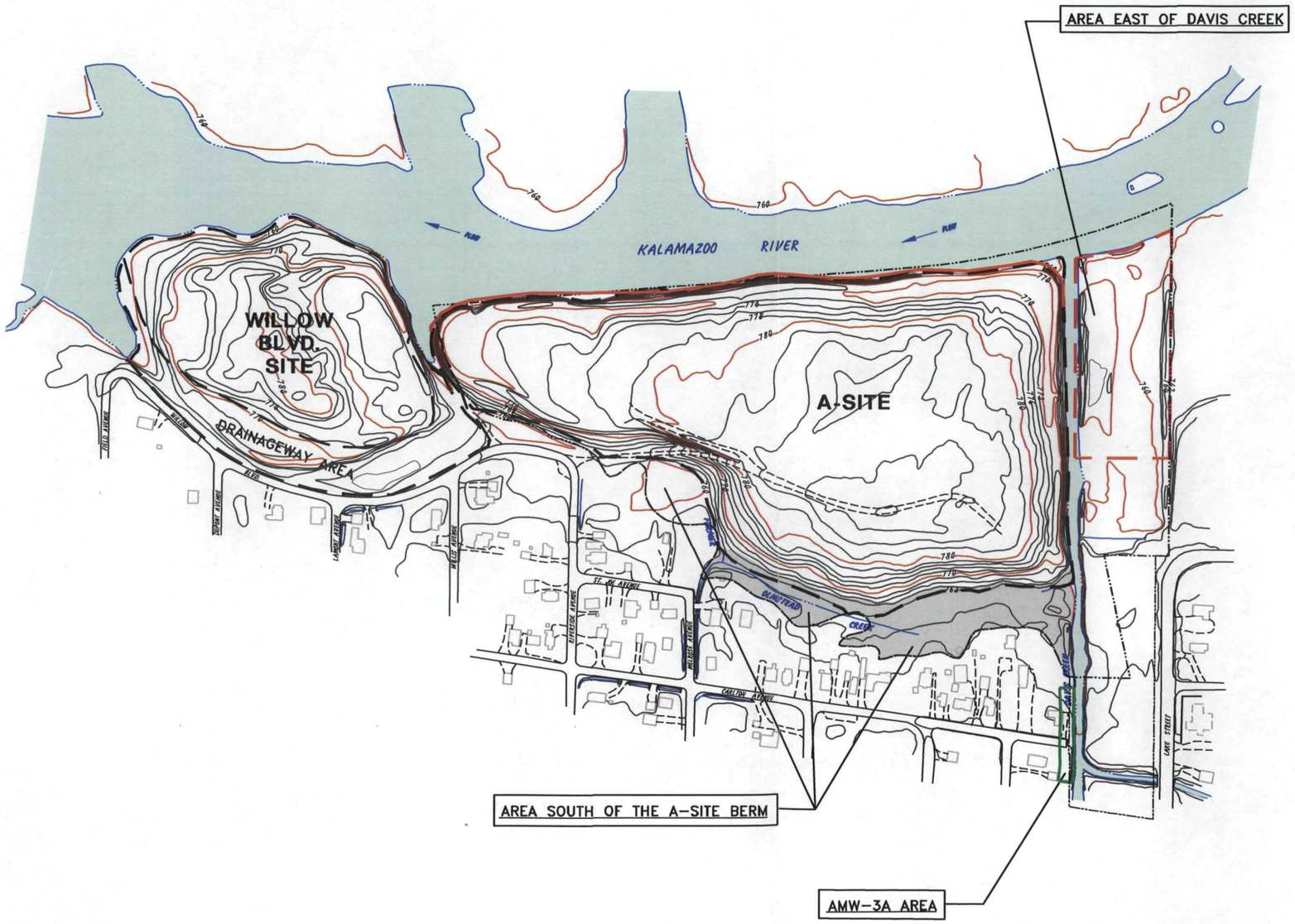
KALAMAZOO RIVER STUDY GROUP
ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER SUPERFUND SITE
REMEDIAL INVESTIGATION/FOCUSED FEASIBILITY STUDY
WILLOW BOULEVARD/A-SITE OU

LOCATION PLAN

FIGURE 4 - OU2 Location Map

FIGURE 2

P: DJA-G3-4
2/22/01 SYR-54-DJO JER GMS
64581640/64581G03.DWG



LEGEND

- 780 — ELEVATION CONTOUR (NGVD 1929)
- EDGE OF WATER OR DRAINAGE CHANNEL
- UNPAVED ROAD/TRAIL
- APPROXIMATE A-SITE BOUNDARY
- GEORGIA-PACIFIC PROPERTY BOUNDARY OUTSIDE OF A-SITE
- FORMER LAGOON AREA
- EXISTING SHEETPILE WALL

NOTES:

1. UNLESS OTHERWISE INDICATED ALL SAMPLE LOCATIONS SURVEYED BY WADE-TRIM INC. OCTOBER 1993 THROUGH AUGUST 1996. SAMPLES ARN-1 THROUGH ARN-5 AND WRN-1 THROUGH WRN-5 WERE SURVEYED BY BBL JULY 1993.
2. TOPOGRAPHIC MAPPING PRODUCED USING PHOTOGRAMMETRIC METHODS BY LOCKWOOD, INC. FROM AERIAL PHOTOGRAPHY FLOWN APRIL 1991. KALAMAZOO RIVER SOUTH BANK, EAST OF DAVIS CREEK REVISED PER CURRENT CONDITIONS. ADDITIONAL TOPOGRAPHIC CHANGES AFTER APRIL 1991 ARE NOT SHOWN.
3. ALL LOCATIONS ARE APPROXIMATE.

150' 0 300'
SCALE

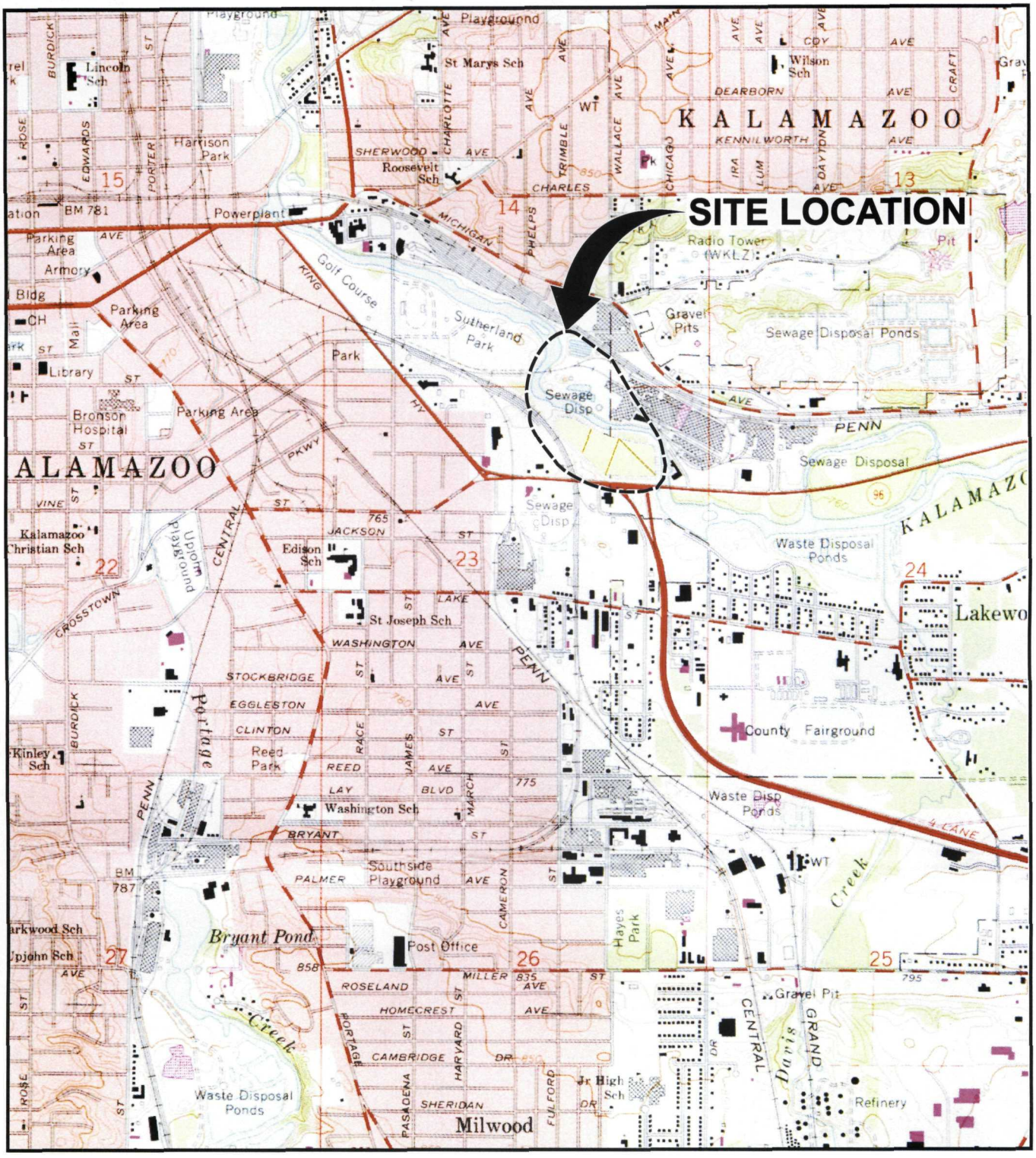
KALAMAZOO RIVER STUDY GROUP
ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER SUPERFUND SITE
REMEDIAL INVESTIGATION/FOCUSED FEASIBILITY STUDY
WILLOW BOULEVARD/A-SITE OU

WILLOW BOULEVARD/A-SITE AND ANCILLARY AREAS

FIGURE 5 - OU2 Site Plan

FIGURE 3

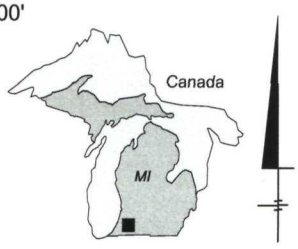
X: 64581X03
L:ON=*, OFF=*REF*, WBL*, *N-*, ON=WBL-SPL
P: FIG-2-3
2/23/01 SYR-54-RLP DJP GMS
64581640/64581008.DWG



REFERENCE: Base Map Source: USGS 7.5 Min. Topo. Quad., Kalamazoo, MI (1967, Photorevised 1973).

2000' 0 2000'

APPROXIMATE SCALE 1" = 2000'

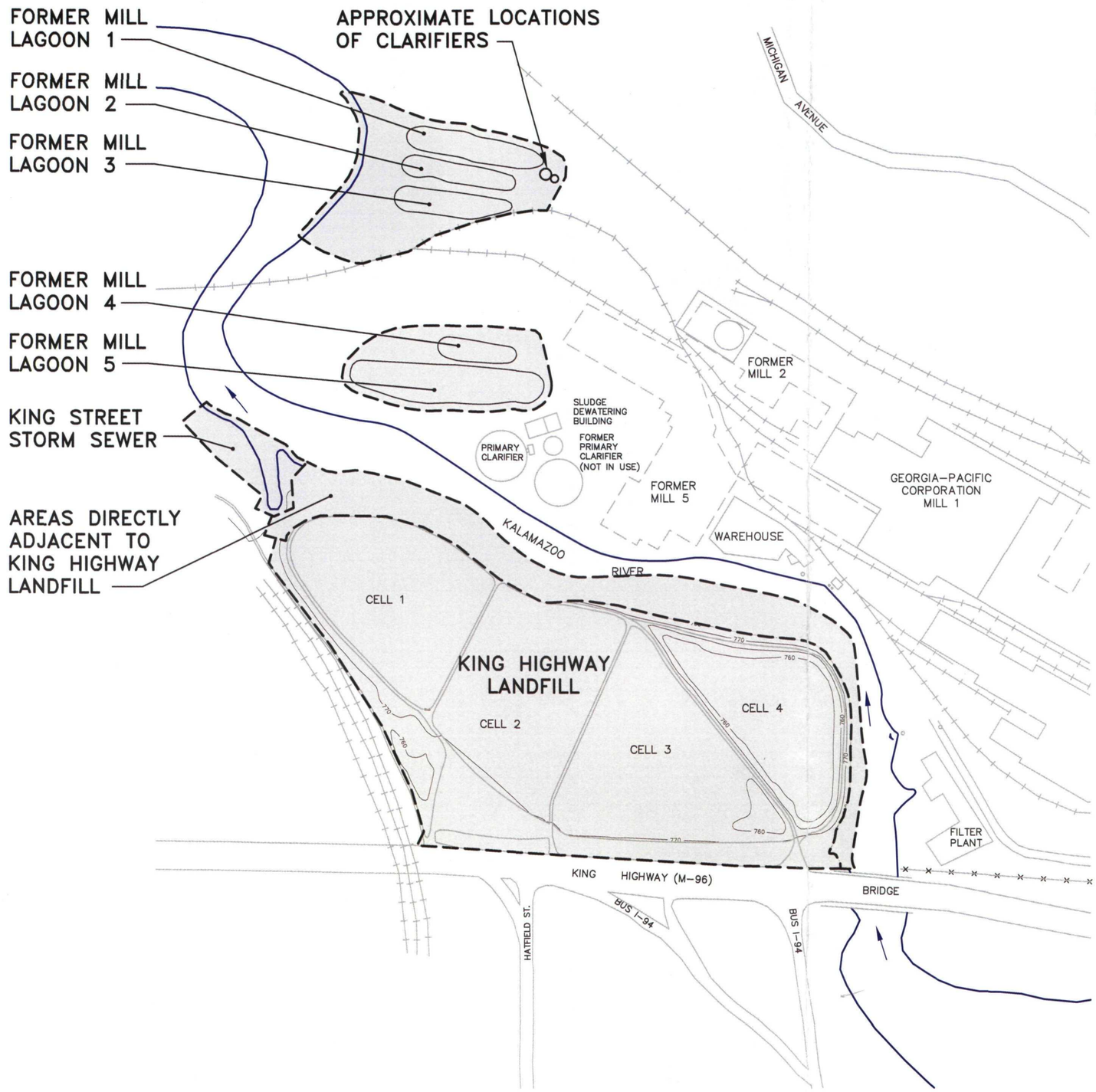


AREA LOCATION

ALLIED PAPER, INC./PORTAGE CREEK
KALAMAZOO RIVER SUPERFUND SITE
EPA 5-YEAR REVIEW REPORT
KHL-OU AND MILL LAGOONS

FIGURE 6 - OU3 Location Map

08/03/07 SYR-D85-DJH-KLS
64583675/64583N01.CDR



LEGEND:

- RAILROAD TRACKS
- LOCATION OF CURRENT STRUCTURES
- FENCE
- RIVER FLOW DIRECTION
- APPROXIMATE BOUNDARY OF THE EXTENT OF REMOVAL ACTION

NOTES:

1. BASE MAP INFORMATION IS APPROXIMATE AND IS BASED ON MAPPING PROVIDED BY MICHIGAN DEPARTMENT OF NATURAL RESOURCES, MAPPING DIGITIZED FROM AERIAL PHOTOGRAPHS, AND VARIOUS MEASUREMENTS AND SURVEYS PERFORMED BY BLASLAND, BOUCK, & LEE, INC.

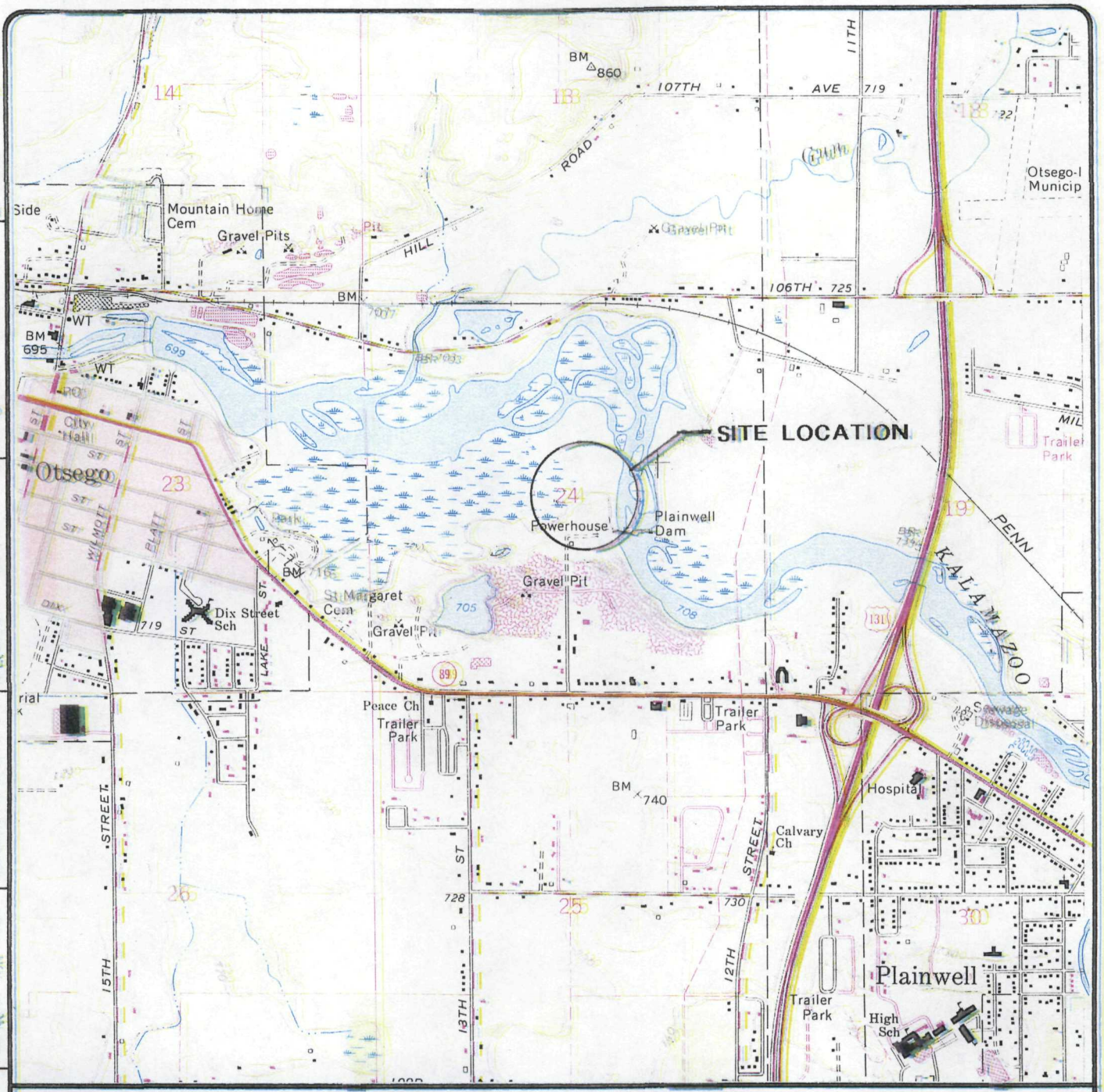
300' 0 300'

APPROXIMATE SCALE: 1" = 300'

ALLIED PAPER, INC./PORTAGE CREEK/
KALAMAZOO RIVER STUDY GROUP
EPA 5-YEAR REVIEW REPORT
KING HIGHWAY LANDFILL OPERABLE UNIT

FIGURE 1 - OU3 Site Plan

SYR-85-KLN JHR LAF LAYER: ON=*; OFF=*REF*
G:\CAD\ACTIVE_DWG\ACT\64583675\EPA\64583G12.DWG SAVED:8/3/2007 2:20 PM LAYOUT:2 PAGESETUP:BL-7300N2-SYR
PENTABLE:PLTFULL.CTB PRINTED:8/3/2007 2:20 PM BY:KSARTORI
PROJECTNAME:----
XREFS: IMAGES:



SOURCE: USGS 7.5 MIN. TOPOGRAPHIC MAP, OTSEGO, MICHIGAN QUADRANGLE, 1967, PHOTOREVISED 1973.

0' 1000' 2000' 4000'

SCALE IN FEET

QUADRANGLE LOCATION

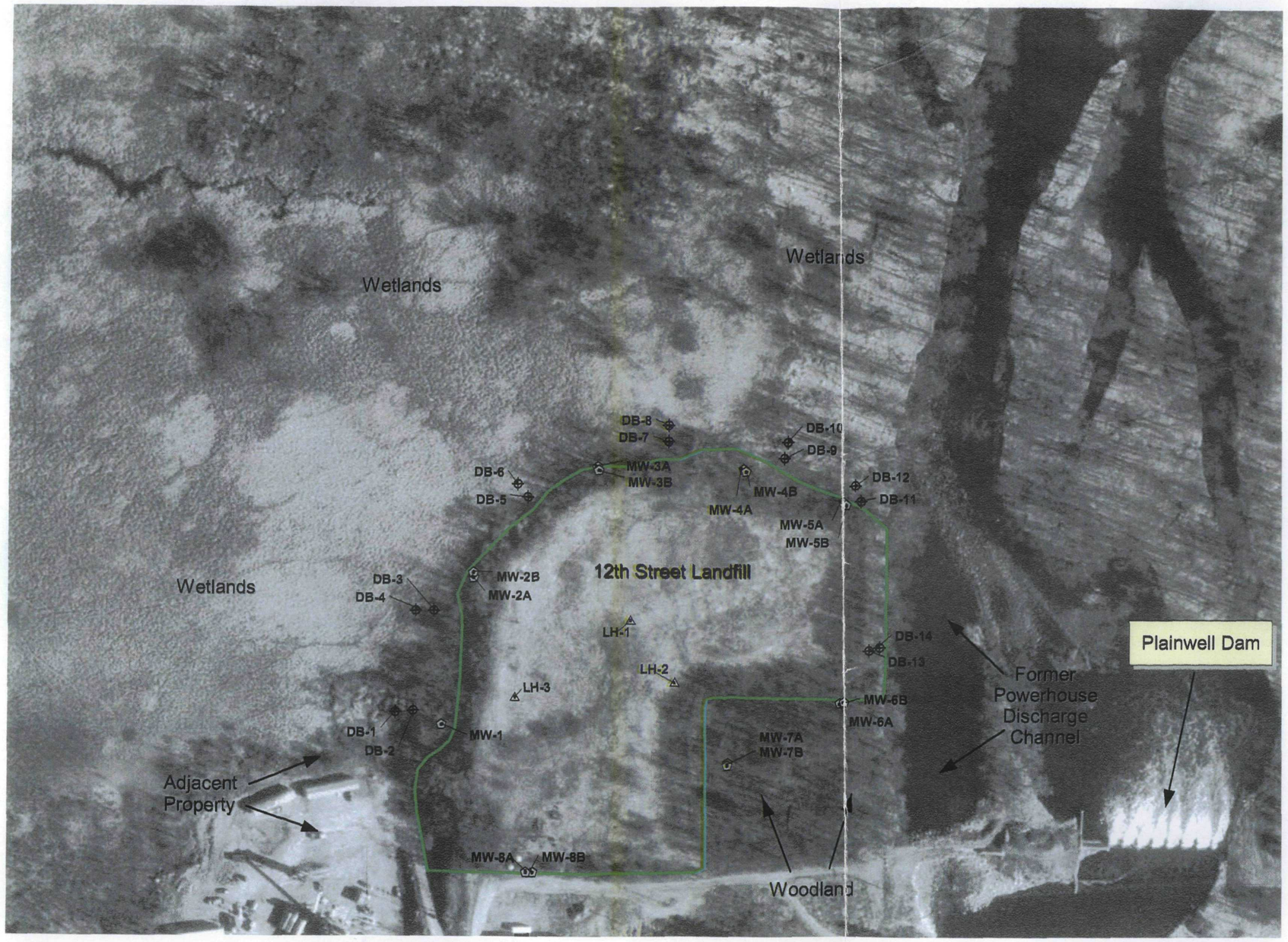
N

GERAGHTY & MILLER, INC.
Environmental Services

SIT
REMEDIAL INVEST
12th STRE
ALLIED PAP
KALAMAZO

FIGURE 8 - OU4 Location Map

DRAFTER: S GONNER | APPROVED: D COWIN | CHECKED: D COWIN | DRAWING: CI09101-A1-1 | FILE NO.: NON-CAD | PRJCT NO.: CI0091.001 | DWG DATE: 2/4/94



N

Legend

Boundary Classifications

12th Street Landfill

DB-1 (Delineation Boring)

MW-1 (Monitoring Well)

LH-1 (Leachate Well)

0 100 200 300 400 Feet

Notes:
(1) Aerial photographs taken by Air Land Surveys, Inc. on 4/24/00.
(2) Coordinates are in State Plane Michigan South NAD 1983.
(3) Coordinates for Delineation Borings (DB-), Monitoring Wells (MW-), and Leachate Wells (LH-) were provided by Blasland, Bouck & Lee.

CDM Camp Dresser & McKee Inc.

One Woodward Ave., Suite 1500
Detroit, Michigan 48226
Phone: (313) 963-1313
Fax: (313) 963-3130

Prepared By:
A. Santini
Updated:
4/18/01

\\Detsvr\DETL007779\c:\proj\28963\OU4_gis\dischargechannel.apr

FIGURE 9 - OU4 Site Plan

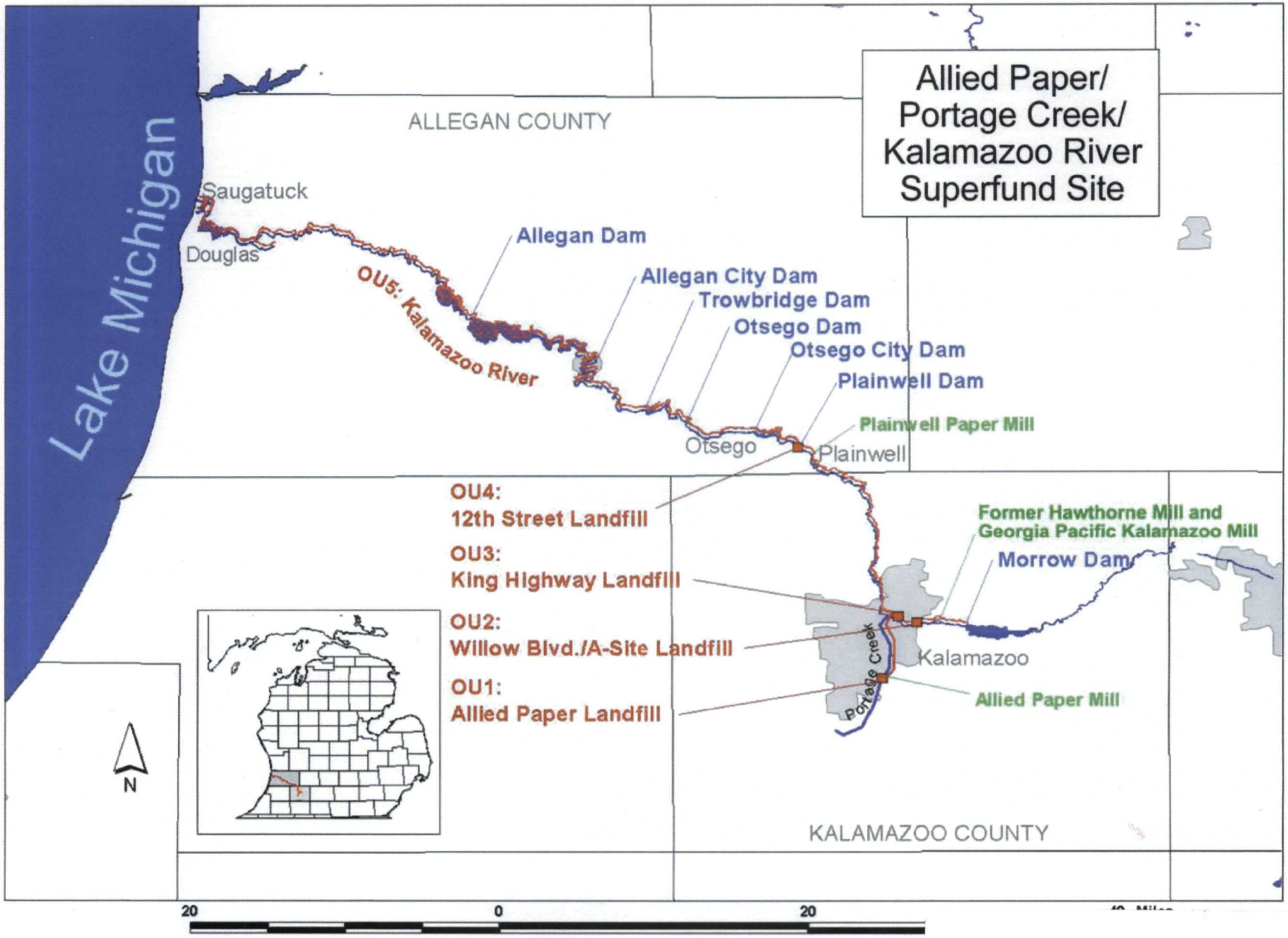


FIGURE 10 - OU5
Site OU Map

BASE MAP FROM USGS 7.5 MINUTE QUADRANGLE, OSTEGO, 1967, REVISED 1973.

RMT
744 Heartland Trail
Madison, WI 53717 - 1934
P.O. Box 8923
Madison, WI 53708 - 8923
Phone: 608-831-4444
Fax: 608-831-3021

SITE L

PLAINWELL MILL B
PLA
PLAINV

Figure 11
OU7 Location Map

D:\05130\03\51300301.mxd 8/29/2007 15:00:31

Attachment 2

Post-Closure Groundwater Sampling Results 1993-2007

POST-CLOSURE GROUNDWATER SAMPLING ANALYTICAL RESULTS SUMMARY

ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER SUPERFUND SITE
KING HIGHWAY LANDFILL OPERABLE UNIT

Sample ID: / Well ID: / Date Collected:	Generic GSI Values	Site Specific WQBEL	Units	H85090 MW-14AR 01/06/03	H85091 MW-15AR 01/06/03	H85092 MW-11RR 01/07/03	H85093 MW-16A 01/07/03	H85094 DUP [MW-12AR] 01/07/03	H85095 MW-12AR 01/07/03	H85096 MW-12B 01/08/03
VOCs										
Acetone	1,700	--	µg/L	ND [8.0]	ND [5.0]	ND [5.0]	ND [16]	ND [5.0]	ND [5.2]	ND [5.0]
SVOCs										
4-Methylphenol[6]	71	--	µg/L	ND [10]	ND [10]	ND [10]	12	ND [10]	ND [10]	ND [10]
Naphthalene	13	--	µg/L	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]
Phenol	210	--	µg/L	ND [10]	ND [10]	ND [10]	29	ND [10]	ND [10]	ND [10]
PCBs										
Aroclor 1016	--	--	µg/L	ND [0.054]	ND [0.052]	ND [0.05]	ND [0.052]	ND [0.051]	ND [0.051]	ND [0.053]
Aroclor 1221	--	--	µg/L	ND [0.054]	ND [0.052]	ND [0.05]	ND [0.052]	ND [0.051]	ND [0.051]	ND [0.053]
Aroclor 1232	--	--	µg/L	ND [0.054]	ND [0.052]	ND [0.05]	ND [0.052]	ND [0.051]	ND [0.051]	ND [0.053]
Aroclor 1242	--	--	µg/L	ND [0.054]	ND [0.052]	ND [0.05]	ND [0.052]	ND [0.051]	ND [0.051]	ND [0.053]
Aroclor 1248	--	--	µg/L	ND [0.054]	ND [0.052]	ND [0.05]	ND [0.052]	ND [0.051]	ND [0.051]	ND [0.053]
Aroclor 1254	--	--	µg/L	ND [0.054]	ND [0.052]	ND [0.05]	ND [0.052]	ND [0.051]	ND [0.051]	ND [0.053]
Aroclor 1260	--	--	µg/L	ND [0.054]	ND [0.052]	ND [0.05]	ND [0.052]	ND [0.051]	ND [0.051]	ND [0.053]
Total PCBs	0.2	--	µg/L	ND	ND	ND	ND	ND	ND	ND
Metals										
Barium	--	2,300	µg/L	312	290	536	435	951	981	287
Calcium	--	--	µg/L	149,000	159,000	183,000	169,000	288,000	297,000	145,000
Chromium[7]	11	--	µg/L	ND [3.7]	ND [3.7]	ND [3.7]	ND [3.7]	ND [3.7]	ND [3.7]	ND [3.7]
Iron	--	--	µg/L	11,200	11,300	5,900	9,960	47,200	48,600	6,290
Sodium	--	--	µg/L	115,000	152,000	75,800	66,800	89,300	92,000	88,800
Thallium	3.7	160	µg/L	ND [2.9]	ND [2.9]	ND [2.9]	ND [2.9]	ND [2.9]	ND [2.9]	ND [2.9]
Zinc	--	1,200	µg/L	ND [3.9]	ND [3.9]	ND [3.9]	ND [3.9]	6.3 B	6.2 B	ND [3.9]
Vanadium	12	--	µg/L	NA	NA	NA	NA	NA	NA	NA
Miscellaneous										
Bicarbonate Alkalinity	--	--	mg/L	486	490	541	493	1,530	1,790	386
Carbonate Alkalinity	--	--	mg/L	ND [1.0]	ND [1.0]	ND [1.0]	ND [1.0]	ND [4.0]	ND [4.0]	ND [1.0]
Chemical Oxygen Demand	--	--	mg/L	ND [20]	ND [20]	20.5	35.6	92.8	106	ND [20]
Hydroxide Alkalinity	--	--	mg/L	ND [1.0]	ND [1.0]	ND [1.0]	ND [1.0]	ND [4.0]	ND [4.0]	ND [1.0]
Nitrate/Nitrite Nitrogen	--	--	mg/L	ND [0.01]	ND [0.01]	0.03	0.14	0.021	ND [0.01]	ND [0.01]
Sulfate	--	--	mg/L	72.2	76.2	76.9	89.4	0.45	0.43	89.2
Total Alkalinity	--	--	mg/L	486	490	541	493	1,530	1,790	386
Total Organic Carbon	--	--	mg/L	5.1	4.7	8.1	12	30.6	32.1	3.3
Total Suspended Solids	--	--	mg/L	28.4	26.6	17.7	27.8	89.7	58.6	17.1

Notes:

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POST-CLOSURE GROUNDWATER SAMPLING ANALYTICAL RESULTS SUMMARY

ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER SUPERFUND SITE
KING HIGHWAY LANDFILL OPERABLE UNIT

Sample ID: / Well ID: / Date Collected:	Generic GSI Values	Site Specific WQBEL	Units	H85097 MW-8AR 01/08/03	H85098 DUP [MW-8AR] 01/08/03	H85099 MW-3AR 01/08/03	H85100 MW-1AR 01/08/03	H85101 MW-8BR 01/08/03	H85102 MW-13AR 01/09/03	H85103 MW-13B 01/09/03
VOCs										
Acetone	1,700	--	µg/L	ND [13]	ND [15]	ND [5.0]	ND [7.5]	ND [5.0]	ND [12]	ND [5.0]
SVOCs										
4-Methylphenol[6]	71	--	µg/L	ND [10]	ND [10]	ND [10]	ND [11]	ND [10]	ND [10]	ND [10]
Naphthalene	13	--	µg/L	ND [10]	ND [10]	ND [10]	ND [11]	ND [10]	ND [10]	ND [10]
Phenol	210	--	µg/L	ND [10]	ND [10]	ND [10]	ND [11]	ND [10]	ND [10]	ND [10]
PCBs										
Aroclor 1016	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.053]	ND [0.051]	ND [0.051]	ND [0.051]
Aroclor 1221	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.053]	ND [0.051]	ND [0.051]	ND [0.051]
Aroclor 1232	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.053]	ND [0.051]	ND [0.051]	ND [0.051]
Aroclor 1242	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.053]	ND [0.051]	ND [0.051]	ND [0.051]
Aroclor 1248	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.053]	ND [0.051]	ND [0.051]	ND [0.051]
Aroclor 1254	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.053]	ND [0.051]	ND [0.051]	ND [0.051]
Aroclor 1260	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.053]	ND [0.051]	ND [0.051]	ND [0.051]
Total PCBs	0.2	--	µg/L	ND	ND	ND	ND	ND	ND	ND
Metals										
Barium	--	2,300	µg/L	358	376	148 B	194 B	278	265	205
Calcium	--	--	µg/L	204,000	214,000	133,000	130,000	160,000	211,000	137,000
Chromium[7]	11	--	µg/L	ND [3.7]	ND [3.7]	ND [3.7]	ND [3.7]	ND [3.7]	12.7	ND [3.7]
Iron	--	--	µg/L	14,900	15,600	49,100	21,100	10,100	18,500	7,130
Sodium	--	--	µg/L	85,100	89,700	32,400	14,400	96,800	67,700	84,800
Thallium	3.7	160	µg/L	ND [2.9]	ND [2.9]	ND [2.9]	ND [2.9]	ND [2.9]	ND [2.9]	ND [2.9]
Zinc	--	1,200	µg/L	ND [3.9]	5.1 B	ND [3.9]	ND [3.9]	ND [3.9]	90.3	ND [3.9]
Vanadium	12	--	µg/L	NA	NA	NA	NA	NA	NA	NA
Miscellaneous										
Bicarbonate Alkalinity	--	--	mg/L	697	700	399	461	452	713	396
Carbonate Alkalinity	--	--	mg/L	ND [1.0]	ND [1.0]	ND [1.0]	ND [1.0]	ND [1.0]	ND [1.0]	ND [1.0]
Chemical Oxygen Demand	--	--	mg/L	50.7	37.8	ND [20]	29.1	ND [20]	33.5	ND [20]
Hydroxide Alkalinity	--	--	mg/L	ND [1.0]	ND [1.0]	ND [1.0]	ND [1.0]	ND [1.0]	ND [1.0]	ND [1.0]
Nitrate/Nitrite Nitrogen	--	--	mg/L	ND [0.01]	ND [0.01]	ND [0.01]	ND [0.01]	0.19	ND [0.01]	ND [0.01]
Sulfate	--	--	mg/L	14	14	44.8	9.5	56.9	6.8	55.7
Total Alkalinity	--	--	mg/L	697	700	399	461	452	713	396
Total Organic Carbon	--	--	mg/L	13	12.9	7.3	9.7	3.8	16.2	3.2
Total Suspended Solids	--	--	mg/L	62.5	36.1	59.9	46.9	18	122	20.5

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POST-CLOSURE GROUNDWATER SAMPLING ANALYTICAL RESULTS SUMMARY

ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER SUPERFUND SITE
KING HIGHWAY LANDFILL OPERABLE UNIT

Sample ID: / Well ID: / Date Collected:	Generic GSI Values	Site Specific WQBEL	Units	H85104 MW-16B 01/09/03	H85105 MW-7 01/09/03	H85106 MW-1AR 05/05/03	H85107 MW-7 05/06/03	H85108 MW-2R 05/06/03	H85109 MW-11RR 05/07/03
VOCs									
Acetone	1,700	--	µg/L	ND [5.0]	ND [5.0]	NA	NA	NA	NA
SVOCs									
4-Methylphenol[6]	71	--	µg/L	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]
Naphthalene	13	--	µg/L	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]
Phenol	210	--	µg/L	ND [10]	ND [10]	NA	NA	NA	NA
PCBs									
Aroclor 1016	--	--	µg/L	ND [0.051]	ND [0.05]	ND [0.052]	ND [0.052]	ND [0.052]	ND [0.053]
Aroclor 1221	--	--	µg/L	ND [0.051]	ND [0.05]	ND [0.052]	ND [0.052]	ND [0.052]	ND [0.053]
Aroclor 1232	--	--	µg/L	ND [0.051]	ND [0.05]	ND [0.052]	ND [0.052]	ND [0.052]	ND [0.053]
Aroclor 1242	--	--	µg/L	ND [0.051]	ND [0.05]	ND [0.052]	ND [0.052]	ND [0.052]	ND [0.053]
Aroclor 1248	--	--	µg/L	ND [0.051]	ND [0.05]	ND [0.052]	ND [0.052]	ND [0.052]	ND [0.053]
Aroclor 1254	--	--	µg/L	ND [0.051]	ND [0.05]	ND [0.052]	ND [0.052]	ND [0.052]	ND [0.053]
Aroclor 1260	--	--	µg/L	ND [0.051]	ND [0.05]	ND [0.052]	ND [0.052]	ND [0.052]	ND [0.053]
Total PCBs	0.2	--	µg/L	ND	ND	ND	ND	ND	ND
Metals									
Barium	--	2,300	µg/L	593	89.8 B	224	78.9 B	150 B	452
Calcium	--	--	µg/L	168,000	176,000	148,000	148,000	152,000	162,000
Chromium[7]	11	--	µg/L	ND [3.7]	4.5 B	NA	NA	NA	NA
Iron	--	--	µg/L	9,420	6,260	28,900	2,250	11,300	5,800
Sodium	--	--	µg/L	73,400	69,100	8,830	55,300	7,670	78,100
Thallium	3.7	160	µg/L	ND [2.9]	ND [2.9]	ND [4.7]	ND [4.7]	ND [4.7]	ND [4.7]
Zinc	--	1,200	µg/L	ND [3.9]	20,800	ND [1.4]	12,400	2.6 B	20.6
Vanadium	12	--	µg/L	NA	NA	NA	NA	NA	NA
Miscellaneous									
Bicarbonate Alkalinity	--	--	mg/L	522	382	NA	NA	NA	NA
Carbonate Alkalinity	--	--	mg/L	ND [1.0]	ND [1.0]	NA	NA	NA	NA
Chemical Oxygen Demand	--	--	mg/L	29.1	31.3	48.6 J	20 UJ	20 UJ	20.5 J
Hydroxide Alkalinity	--	--	mg/L	ND [1.0]	ND [1.0]	NA	NA	NA	NA
Nitrate/Nitrite Nitrogen	--	--	mg/L	ND [0.01]	ND [0.01]	NA	NA	NA	NA
Sulfate	--	--	mg/L	54.2	150	NA	NA	NA	NA
Total Alkalinity	--	--	mg/L	522	382	NA	NA	NA	NA
Total Organic Carbon	--	--	mg/L	10.4	3.6	8.6	3.2	4.3	7.6
Total Suspended Solids	--	--	mg/L	24.6	42.3	NA	NA	NA	NA

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POST-CLOSURE GROUNDWATER SAMPLING ANALYTICAL RESULTS SUMMARY

ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER SUPERFUND SITE
KING HIGHWAY LANDFILL OPERABLE UNIT

Sample ID: / Well ID: / Date Collected:	Generic GSI Values	Site Specific WQBEL	Units	H85110 MW-16A 05/07/03	H85111 MW-16B 05/09/03	H85112 MW-12B 05/08/03	H85113 MW-12AR 05/08/03	H85114 DUP [MW-12AR] 05/08/03	H85115 Rinse Blank [MW-11RR] 05/08/03	H85116 MW-13B 05/08/03
VOCs										
Acetone	1,700	--	µg/L	NA	NA	NA	NA	NA	NA	NA
SVOCs										
4-Methylphenol[6]	71	--	µg/L	ND [10]	1.5 J	ND [10]	4.2 J	6.3 J	ND [10]	ND [10]
Naphthalene	13	--	µg/L	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]
Phenol	210	--	µg/L	NA	NA	NA	NA	NA	NA	NA
PCBs										
Aroclor 1016	--	--	µg/L	ND [0.052]	ND [0.051]	ND [0.051]	ND [0.052]	ND [0.052]	ND [0.053]	ND [0.051]
Aroclor 1221	--	--	µg/L	ND [0.052]	ND [0.051]	ND [0.051]	ND [0.052]	ND [0.052]	ND [0.053]	ND [0.051]
Aroclor 1232	--	--	µg/L	ND [0.052]	ND [0.051]	ND [0.051]	ND [0.052]	ND [0.052]	ND [0.053]	ND [0.051]
Aroclor 1242	--	--	µg/L	ND [0.052]	0.028 J	ND [0.051]	ND [0.052]	ND [0.052]	ND [0.053]	ND [0.051]
Aroclor 1248	--	--	µg/L	ND [0.052]	ND [0.051]	ND [0.051]	ND [0.052]	ND [0.052]	ND [0.053]	ND [0.051]
Aroclor 1254	--	--	µg/L	ND [0.052]	ND [0.051]	ND [0.051]	ND [0.052]	ND [0.052]	ND [0.053]	ND [0.051]
Aroclor 1260	--	--	µg/L	ND [0.052]	ND [0.051]	ND [0.051]	ND [0.052]	ND [0.052]	ND [0.053]	ND [0.051]
Total PCBs	0.2	--	µg/L	ND	0.028 J	ND	ND	ND	ND	ND
Metals										
Barium	--	2,300	µg/L	431	547	272	856	828	ND [12.3]	178 B
Calcium	--	--	µg/L	171,000	155,000	132,000	259,000	252,000	ND [308]	127,000
Chromium[7]	11	--	µg/L	NA	NA	NA	NA	NA	NA	NA
Iron	--	--	µg/L	10,300	9,310	5,200	43,100	41,800	ND [31.1]	6,190
Sodium	--	--	µg/L	64,700	65,200	83,400	85,500	82,900	771 B	80,800
Thallium	3.7	160	µg/L	ND [4.7]	ND [4.7]	ND [4.7]	ND [4.7]	ND [4.7]	ND [4.7]	ND [4.7]
Zinc	--	1,200	µg/L	2.1 B	ND [1.4]	1.9 B	1.7 B	ND [1.4]	ND [1.4]	ND [1.4]
Vanadium	12	--	µg/L	NA	NA	NA	NA	NA	NA	NA
Miscellaneous										
Bicarbonate Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA
Carbonate Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA
Chemical Oxygen Demand	--	--	mg/L	20 UJ	39.9 J	31.3 J	98.2 J	98.2 J	20 UJ	57.2 J
Hydroxide Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite Nitrogen	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA
Sulfate	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA
Total Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	--	--	mg/L	10.1	7.9	2.2	33.5	33.3	ND [1.0]	2.7
Total Suspended Solids	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA

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POST-CLOSURE GROUNDWATER SAMPLING ANALYTICAL RESULTS SUMMARY

ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER SUPERFUND SITE
KING HIGHWAY LANDFILL OPERABLE UNIT

Sample ID: / Well ID: / Date Collected:	Generic GSI Values	Site Specific WQBEL	Units	H85117 MW-13AR 05/09/03	H85118 MW-8BR 05/09/03	H85119 MW-8AR 05/12/03	H85120 DUP [MW-8AR] 05/12/03	H85121 MW-14AR 05/12/03	H85122 MW-15AR 05/12/03	H85123 MW-3AR 05/12/03
VOCs										
Acetone	1,700	--	µg/L	NA	NA	NA	NA	NA	NA	NA
SVOCs										
4-Methylphenol[6]	71	--	µg/L	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [11]
Naphthalene	13	--	µg/L	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [11]
Phenol	210	--	µg/L	NA	NA	NA	NA	NA	NA	NA
PCBs										
Aroclor 1016	--	--	µg/L	ND [0.051]	ND [0.052]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.05]	ND [0.05]
Aroclor 1221	--	--	µg/L	ND [0.051]	ND [0.052]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.05]	ND [0.05]
Aroclor 1232	--	--	µg/L	ND [0.051]	ND [0.052]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.05]	ND [0.05]
Aroclor 1242	--	--	µg/L	ND [0.051]	ND [0.052]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.05]	ND [0.05]
Aroclor 1248	--	--	µg/L	ND [0.051]	ND [0.052]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.05]	ND [0.05]
Aroclor 1254	--	--	µg/L	ND [0.051]	ND [0.052]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.05]	ND [0.05]
Aroclor 1260	--	--	µg/L	ND [0.051]	ND [0.052]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.05]	ND [0.05]
Total PCBs	0.2	--	µg/L	ND	ND	ND	ND	ND	ND	ND
Metals										
Barium	--	2,300	µg/L	293	269	422	398	282	284	196 B
Calcium	--	--	µg/L	186,000	154,000	191,000	180,000	136,000	154,000	138,000
Chromium[7]	11	--	µg/L	NA	NA	NA	NA	NA	NA	NA
Iron	--	--	µg/L	32,600	9,970	26,200	24,400	10,000	11,200	29,500
Sodium	--	--	µg/L	64,100	95,700	92,700	87,600	112,000	151,000	19,700
Thallium	3.7	160	µg/L	ND [4.7]	ND [4.7]	ND [4.7]	ND [4.7]	ND [4.7]	ND [4.7]	ND [4.7]
Zinc	--	1,200	µg/L	ND [1.4]	ND [1.4]	2.1 B	ND [1.4]	ND [1.4]	2 B	1.6 B
Vanadium	12	--	µg/L	NA	NA	NA	NA	NA	NA	NA
Miscellaneous										
Bicarbonate Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA
Carbonate Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA
Chemical Oxygen Demand	--	--	mg/L	27 J	20 UJ	27 J	27 J	27 J	20 UJ	20 UJ
Hydroxide Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite Nitrogen	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA
Sulfate	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA
Total Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	--	--	mg/L	8.9	4.2	11.5	11.9	4.7	4.7	6.2
Total Suspended Solids	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA

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POST-CLOSURE GROUNDWATER SAMPLING ANALYTICAL RESULTS SUMMARY

ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER SUPERFUND SITE
KING HIGHWAY LANDFILL OPERABLE UNIT

Sample ID: / Well ID: / Date Collected:	Generic GSI Values	Site Specific WQBEL	Units	H85124 MW-7 08/12/03	H85125 MW-2R 08/12/03	H85126 MW-1AR 08/12/03	H85127 MW-11RR 08/13/03	H85128 Rinse Blank [MW-11RR] 08/13/03	H85129 MW-16A 08/13/03	H85130 MW-16B 08/13/03
VOCs										
Acetone	1,700	--	µg/L	NA	NA	NA	NA	NA	NA	NA
SVOCs										
4-Methylphenol[6]	71	--	µg/L	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]
Naphthalene	13	--	µg/L	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]
Phenol	210	--	µg/L	NA	NA	NA	NA	NA	NA	NA
PCBs										
Aroclor 1016	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]
Aroclor 1221	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]
Aroclor 1232	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]
Aroclor 1242	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]
Aroclor 1248	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]
Aroclor 1254	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]
Aroclor 1260	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]
Total PCBs	0.2	--	µg/L	ND	ND	ND	ND	ND	ND	ND
Metals										
Barium	--	2,300	µg/L	78.3 B	126 B	354	438	ND [5.9]	381	490
Calcium	--	--	µg/L	155,000	138,000	216,000	165,000	ND [182]	163,000	149,000
Chromium[7]	11	--	µg/L	NA	NA	NA	NA	NA	NA	NA
Iron	--	--	µg/L	2,780 J	9,770 J	46,700 J	5,430 J	33.3 UJ	9,200 J	8,570 J
Sodium	--	--	µg/L	73,000	3,760 B	8,050	74,500	ND [621]	65,500	67,700
Thallium	3.7	160	µg/L	ND [5.7]	ND [5.7]	ND [5.7]	ND [5.7]	ND [5.7]	ND [5.7]	ND [5.7]
Zinc	--	1,200	µg/L	6,690	ND [4.9]	ND [2.8]	ND [5.8]	ND [1.8]	ND [3.8]	ND [2]
Vanadium	12	--	µg/L	NA	NA	NA	NA	NA	NA	NA
Miscellaneous										
Bicarbonate Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA
Carbonate Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA
Chemical Oxygen Demand	--	--	mg/L	ND [20]	ND [20]	25.9	ND [20]	ND [20]	ND [20]	28
Hydroxide Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite Nitrogen	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA
Sulfate	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA
Total Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	--	--	mg/L	3.5 J	4.9 J	8.3 J	6.8 J	1.0 UJ	6.8 J	7.1 J
Total Suspended Solids	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA

Notes:

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9. The WQBEL values are per the MDEQ Surface Water Quality Division, as recommended in a January 22, 1998 interoffice communication.

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POST-CLOSURE GROUNDWATER SAMPLING ANALYTICAL RESULTS SUMMARY

ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER SUPERFUND SITE
KING HIGHWAY LANDFILL OPERABLE UNIT

Sample ID:				H85131	H85132	H85133	H85134	H85135	H85136
Well ID:		Site Specific		MW-12B	MW-12AR	DUP [MW-12AR]	MW-13B	MW-13AR	MW-8BR
Date Collected:	Generic GSI Values	WQBEL	Units	08/14/03	08/14/03	08/14/03	08/14/03	08/14/03	08/14/03
VOCs									
Acetone	1,700	--	µg/L	NA	NA	NA	NA	NA	NA
SVOCs									
4-Methylphenol[6]	71	--	µg/L	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]
Naphthalene	13	--	µg/L	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]
Phenol	210	--	µg/L	NA	NA	NA	NA	NA	NA
PCBs									
Aroclor 1016	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]
Aroclor 1221	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]
Aroclor 1232	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]
Aroclor 1242	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]
Aroclor 1248	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]
Aroclor 1254	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]
Aroclor 1260	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]
Total PCBs	0.2	--	µg/L	ND	ND	ND	ND	ND	ND
Metals									
Barium	--	2,300	µg/L	272	836	836	206	288	276
Calcium	--	--	µg/L	133,000	264,000	270,000	139,000	183,000	158,000
Chromium[7]	11	--	µg/L	NA	NA	NA	NA	NA	NA
Iron	--	--	µg/L	5,170	47,100	45,600	7,860	33,600	10,800
Sodium	--	--	µg/L	90,000	93,000	94,100	92,400	75,100	104,000
Thallium	3.7	160	µg/L	ND [2.8]	ND [2.8]	ND [2.8]	ND [2.8]	ND [2.8]	ND [2.8]
Zinc	--	1,200	µg/L	ND [11.4]	12.8 B	ND [9.4]	ND [5.7]	ND [5.7]	ND [5.7]
Vanadium	12	--	µg/L	NA	NA	NA	NA	NA	NA
Miscellaneous									
Bicarbonate Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA
Carbonate Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA
Chemical Oxygen Demand	--	--	mg/L	ND [20]	88.8	82.5	82.5	40.6	ND [20]
Hydroxide Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite Nitrogen	--	--	mg/L	NA	NA	NA	NA	NA	NA
Sulfate	--	--	mg/L	NA	NA	NA	NA	NA	NA
Total Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA
Total Organic Carbon	--	--	mg/L	3.2 J	26.6 J	26.3 J	3.6 J	9.7 J	5.5 J
Total Suspended Solids	--	--	mg/L	NA	NA	NA	NA	NA	NA

Notes:

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POST-CLOSURE GROUNDWATER SAMPLING ANALYTICAL RESULTS SUMMARY

ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER SUPERFUND SITE
KING HIGHWAY LANDFILL OPERABLE UNIT

Sample ID:				H85137	H85138	H85139	H85140	H85141	H85142	H85143	H85144
Well ID:		Site Specific		MW-8AR	DUP [MW-8AR]	MW-14AR	MW-15AR	MW-3AR	MW-2R	MW-7	MW-1AR
Date Collected:	Generic GSI Values	WQBEL	Units	08/14/03	08/14/03	08/15/03	08/15/03	08/15/03	11/03/03	11/04/03	11/04/03
VOCs											
Acetone	1,700	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
SVOCs											
4-Methylphenol[6]	71	--	µg/L	ND [10]	ND [10]	ND [10]	ND [10]	ND [11]	ND [10]	ND [10]	ND [10]
Naphthalene	13	--	µg/L	ND [10]	ND [10]	ND [10]	ND [10]	ND [11]	ND [10]	ND [10]	ND [10]
Phenol	210	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
PCBs											
Aroclor 1016	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.05]	ND [0.05]	ND [0.05]
Aroclor 1221	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.05]	ND [0.05]	ND [0.05]
Aroclor 1232	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.05]	ND [0.05]	ND [0.05]
Aroclor 1242	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.05]	ND [0.05]	ND [0.05]
Aroclor 1248	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.05]	ND [0.05]	ND [0.05]
Aroclor 1254	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.05]	ND [0.05]	ND [0.05]
Aroclor 1260	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.05]	ND [0.05]	ND [0.05]
Total PCBs	0.2	--	µg/L	ND	ND	ND	ND	ND	ND	ND	ND
Metals											
Barium	--	2,300	µg/L	455	476	290	258	195 B	185 B	74.8 B	286
Calcium	--	--	µg/L	200,000	208,000	148,000	148,000	157,000	139,000	145,000	170,000
Chromium[7]	11	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
Iron	--	--	µg/L	23,100	24,400	10,400	10,300	12,800	9,210	2,830	36,000
Sodium	--	--	µg/L	97,600	102,000	112,000	140,000	147,000	2,860 B	77,000	10,300
Thallium	3.7	160	µg/L	ND [2.8]	ND [2.8]	ND [2.8]	ND [2.8]	ND [2.8]	ND [5.1]	ND [5.1]	ND [5.1]
Zinc	--	1,200	µg/L	ND [5.7]	ND [5.7]	ND [5.7]	ND [5.7]	ND [5.7]	NA	NA	NA
Vanadium	12	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
Miscellaneous											
Bicarbonate Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Carbonate Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Chemical Oxygen Demand	--	--	mg/L	42.7	49	ND [20]	ND [20]	21.7	ND [20]	ND [20]	23.8
Hydroxide Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite Nitrogen	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Total Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	--	--	mg/L	13.1 J	13.5 J	4.9 J	4.5 J	4.3 J	1.0 UJ	2.3	8.5
Total Suspended Solids	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

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POST-CLOSURE GROUNDWATER SAMPLING ANALYTICAL RESULTS SUMMARY

ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER SUPERFUND SITE
KING HIGHWAY LANDFILL OPERABLE UNIT

Sample ID: / Well ID: / Date Collected:	Generic GSI Values	Site Specific WQBEL	Units	H85145 MW-11RR 11/05/03	H85146 MW-12B 11/05/03	H85147 Rinse Blank [MW-11RR] 11/05/03	H85148 MW-12AR 11/05/03	H85149 DUP [MW-12AR] 11/05/03	H85150 MW-13B 11/06/03	H85151 MW-8BR 11/06/03	H85152 MW-13AR 11/06/03
VOCs											
Acetone	1,700	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
SVOCs											
4-Methylphenol[6]	71	--	µg/L	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]
Naphthalene	13	--	µg/L	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]
Phenol	210	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
PCBs											
Aroclor 1016	--	--	µg/L	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]
Aroclor 1221	--	--	µg/L	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]
Aroclor 1232	--	--	µg/L	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]
Aroclor 1242	--	--	µg/L	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]
Aroclor 1248	--	--	µg/L	*ND [0.05]*	*ND [0.05]*	*ND [0.05]*	*ND [0.05]*	*ND [0.05]*	*ND [0.05]*	*ND [0.05]*	*ND [0.05]*
Aroclor 1254	--	--	µg/L	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]
Aroclor 1260	--	--	µg/L	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]
Total PCBs	0.2	--	µg/L	ND	ND	ND	ND	ND	ND	ND	ND
Metals											
Barium	--	2,300	µg/L	436	262	ND [11.7]	801	785	161 B	238	316
Calcium	--	--	µg/L	158,000	127,000	ND [325]	253,000	246,000	131,000	133,000	189,000
Chromium[7]	11	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
Iron	--	--	µg/L	4,190	5,040	ND [30]	41,600	40,600	5,410	9,110	32,700
Sodium	--	--	µg/L	74,000	86,500	ND [502]	85,200	83,200	85,400	99,400	67,500
Thallium	3.7	160	µg/L	ND [5.1]	ND [5.1]	ND [5.1]	ND [5.1]	ND [5.1]	ND [5.1]	ND [5.1]	ND [5.1]
Zinc	--	1,200	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	12	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
Miscellaneous											
Bicarbonate Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Carbonate Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Chemical Oxygen Demand	--	--	mg/L	*ND [20]*	*ND [20]*	*ND [20]*	*ND [20]*	*80.4*	*84.6*	*ND [20]*	*23.8*
Hydroxide Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite Nitrogen	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Total Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	--	--	mg/L	10	2.6	ND [1.0]	28.4	25.7	3.1	5.5	10.1
Total Suspended Solids	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA

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POST-CLOSURE GROUNDWATER SAMPLING ANALYTICAL RESULTS SUMMARY

ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER SUPERFUND SITE
KING HIGHWAY LANDFILL OPERABLE UNIT

Sample ID: / Well ID: / Date Collected:	Generic GSI Values	Site Specific WQBEL	Units	H85153 MW-8AR 11/06/03	H85154 DUP [MW-8AR] 11/06/03	H85155 MW-16B 11/07/03	H85156 MW-16A 11/07/03	H85157 MW-14AR 11/10/03	H85158 MW-15AR 11/10/03	H85159 MW-3AR 11/10/03
VOCs										
Acetone	1,700	--	µg/L	NA	NA	NA	NA	NA	NA	NA
SVOCs										
4-Methylphenol[6]	71	--	µg/L	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	1.3 J
Naphthalene	13	--	µg/L	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]
Phenol	210	--	µg/L	NA	NA	NA	NA	NA	NA	NA
PCBs										
Aroclor 1016	--	--	µg/L	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]
Aroclor 1221	--	--	µg/L	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]
Aroclor 1232	--	--	µg/L	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]
Aroclor 1242	--	--	µg/L	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]
Aroclor 1248	--	--	µg/L	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]
Aroclor 1254	--	--	µg/L	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]
Aroclor 1260	--	--	µg/L	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]
Total PCBs	0.2	--	µg/L	ND	ND	ND	ND	ND	ND	ND
Metals										
Barium	--	2,300	µg/L	450	456	492	404	281	260	444
Calcium	--	--	µg/L	198,000	201,000	146,000	169,000	146,000	148,000	168,000
Chromium[7]	11	--	µg/L	NA	NA	NA	NA	NA	NA	NA
Iron	--	--	µg/L	49,100	49,400	8,450	9,540	10,400	10,400	174,000
Sodium	--	--	µg/L	10,200	10,300	71,200	65,400	106,000	122,000	14,400
Thallium	3.7	160	µg/L	ND [5.1]	ND [5.1]	ND [5.1]	ND [5.1]	ND [5.1]	ND [5.1]	6.5 B
Zinc	--	1,200	µg/L	NA	NA	NA	NA	NA	NA	NA
Vanadium	12	--	µg/L	NA	NA	NA	NA	NA	NA	NA
Miscellaneous										
Bicarbonate Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA
Carbonate Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA
Chemical Oxygen Demand	--	--	mg/L	28	30.1	61.5	21.7	ND [20]	ND [20]	82.5
Hydroxide Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite Nitrogen	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA
Sulfate	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA
Total Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	--	--	mg/L	7.9	9.2	9.1	7.9	3.8	5.5	13.7
Total Suspended Solids	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA

Notes:

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9. The WQBEL values are per the MDEQ Surface Water Quality Division, as recommended in a January 22, 1998 interoffice communication.

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UJ - The compound/analyte was not detected above the reported sample quantitation/detection limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation/detection.

POST-CLOSURE GROUNDWATER SAMPLING ANALYTICAL RESULTS SUMMARY

ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER SUPERFUND SITE
KING HIGHWAY LANDFILL OPERABLE UNIT

Sample ID: / Well ID: / Date Collected:	Generic GSI Values	Site Specific WQBEL	Units	H85160 MW-7 02/23/04	H85161 MW-2R 02/24/04	H85162 MW-1AR 02/24/04	H85163 MW-11RR 02/24/04	H85164 MW-16A 02/24/04	H85165 Rinse Blank [MW-11RR] 02/25/04	H85166 MW-16B 02/25/04	H85167 MW-12B 02/25/04
VOCs											
Acetone	1,700	--	µg/L	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	2.6 J	ND [5.0]	2.5 J	ND [5.0]
SVOCs											
4-Methylphenol[8]	71	--	µg/L	ND [10]	ND [11]	ND [10]	ND [11]	ND [10]	ND [10]	ND [10]	ND [10]
Naphthalene	13	--	µg/L	ND [10]	ND [11]	ND [10]	ND [11]	ND [10]	ND [10]	ND [10]	ND [10]
Phenol	210	--	µg/L	ND [10]	ND [11]	ND [10]	ND [11]	0.65 J	ND [10]	ND [10]	ND [10]
PCBs											
Aroclor 1016	--	--	µg/L	ND [0.051]	ND [0.052]	ND [0.051]	ND [0.054]	ND [0.052]	ND [0.051]	ND [0.051]	ND [0.051]
Aroclor 1221	--	--	µg/L	ND [0.051]	ND [0.052]	ND [0.051]	ND [0.054]	ND [0.052]	ND [0.051]	ND [0.051]	ND [0.051]
Aroclor 1232	--	--	µg/L	ND [0.051]	ND [0.052]	ND [0.051]	ND [0.054]	ND [0.052]	ND [0.051]	ND [0.051]	ND [0.051]
Aroclor 1242	--	--	µg/L	ND [0.051]	ND [0.052]	ND [0.051]	ND [0.054]	ND [0.052]	ND [0.051]	ND [0.051]	ND [0.051]
Aroclor 1248	--	--	µg/L	ND [0.051]	ND [0.052]	ND [0.051]	ND [0.054]	ND [0.052]	ND [0.051]	ND [0.051]	ND [0.051]
Aroclor 1254	--	--	µg/L	ND [0.051]	ND [0.052]	ND [0.051]	ND [0.054]	ND [0.052]	ND [0.051]	ND [0.051]	ND [0.051]
Aroclor 1260	--	--	µg/L	ND [0.051]	ND [0.052]	ND [0.051]	ND [0.054]	ND [0.052]	ND [0.051]	ND [0.051]	ND [0.051]
Total PCBs	0.2	--	µg/L	ND	ND	ND	ND	ND	ND	ND	ND
Metals											
Barium	--	2,300	µg/L	*74.3 B*	*164 B*	*351*	*418*	*406*	*ND [5.3]*	*514*	*258*
Calcium	--	--	µg/L	150,000	150,000	219,000	162,000	173,000	176 B	150,000	127,000
Chromium[7]	11	--	µg/L	ND [1.5]	ND [1.5]	ND [1.5]	ND [1.5]	ND [1.5]	ND [1.5]	ND [1.5]	ND [1.5]
Iron	--	--	µg/L	3,040	7,560	46,200	4,560	10,500	ND [35.7]	8,890	4,910
Sodium	--	--	µg/L	76,700	46,000	10,600	80,000	70,400	ND [515]	75,300	89,000
Thallium	3.7	160	µg/L	ND [4.2]	ND [4.2]	4.7 B	ND [4.2]	ND [4.2]	ND [4.2]	ND [4.2]	ND [4.2]
Zinc	--	1,200	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	12	--	µg/L	ND [2.2]	ND [2.2]	ND [2.2]	ND [2.2]	ND [2.2]	ND [2.2]	ND [2.2]	ND [2.2]
Miscellaneous											
Bicarbonate Alkalinity	--	--	mg/L	380	439	784	456	492	4.0	473	361
Carbonate Alkalinity	--	--	mg/L	ND [1.0]	ND [1.0]	ND [5.0]	ND [1.0]	ND [1.0]	ND [1.0]	ND [1.0]	ND [1.0]
Chemical Oxygen Demand	--	--	mg/L	ND [20]	ND [20]	42.6	ND [20]	32	55.3	36.2	48.9
Hydroxide Alkalinity	--	--	mg/L	ND [1.0]	ND [1.0]	ND [5.0]	ND [1.0]	ND [1.0]	ND [1.0]	ND [1.0]	ND [1.0]
Nitrate/Nitrite Nitrogen	--	--	mg/L	0.076	0.013	0.026	0.027	ND [0.01]	0.063	ND [0.01]	ND [0.01]
Sulfate	--	--	mg/L	129	53.8	1.1	67.7	73.7	ND [0.2]	46.4	66.4
Total Alkalinity	--	--	mg/L	380	439	784	456	492	4.0	473	361
Total Organic Carbon	--	--	mg/L	3.4	4.8	10.1	7.6	8.6	ND [1.0]	8.1	3.7
Total Suspended Solids	--	--	mg/L	16.2	17.7	35.3	12.6	22.1	ND [0.5]	24.5	11.2

Notes:

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POST-CLOSURE GROUNDWATER SAMPLING ANALYTICAL RESULTS SUMMARY

ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER SUPERFUND SITE
KING HIGHWAY LANDFILL OPERABLE UNIT

Sample ID: / Well ID: / Date Collected:	Generic GSI Values	Site Specific WQBEL	Units	H85168 MW-12AR 02/26/04	H85169 MW-13B 02/26/04	H85170 MW-13AR 02/26/04	H85171 MW-8BR 02/26/04	H85172 MW-8AR 02/27/04	H85173 DUP [MW-8AR] 02/27/04	H85174 MW-14AR 02/27/04
VOCs										
Acetone	1,700	--	µg/L	2.9 J	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]
SVOCs										
4-Methylphenol[6]	71	--	µg/L	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]
Naphthalene	13	--	µg/L	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]
Phenol	210	--	µg/L	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]
PCBs										
Aroclor 1016	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]
Aroclor 1221	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]
Aroclor 1232	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]
Aroclor 1242	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]
Aroclor 1248	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]
Aroclor 1254	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]
Aroclor 1260	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]
Total PCBs	0.2	--	µg/L	ND	ND	ND	ND	ND	ND	ND
Metals										
Barium	--	2,300	µg/L	771	175 B	384	261	394	396	270
Calcium	--	--	µg/L	244,000	137,000	208,000	157,000	178,000	177,000	148,000
Chromium[7]	11	--	µg/L	ND [1.5]	ND [1.5]	ND [1.5]	ND [1.5]	ND [1.5]	ND [1.5]	ND [1.5]
Iron	--	--	µg/L	38,400	6,000	48,500	10,300	33,000	32,800	10,500
Sodium	--	--	µg/L	88,600	87,300	56,300	95,200	89,800	90,500	96,700
Thallium	3.7	160	µg/L	ND [4.2]	ND [4.2]	ND [4.2]	ND [4.2]	ND [4.2]	ND [4.2]	ND [4.2]
Zinc	--	1,200	µg/L	NA	NA	NA	NA	NA	NA	NA
Vanadium	12	--	µg/L	2.4 B	ND [2.2]	ND [2.2]	ND [2.2]	ND [2.2]	ND [2.2]	ND [2.2]
Miscellaneous										
Bicarbonate Alkalinity	--	--	mg/L	995	384	860	497	605	584	460
Carbonate Alkalinity	--	--	mg/L	ND [5.0]	ND [1.0]	ND [5.0]	ND [1.0]	ND [2.0]	ND [2.0]	ND [2.0]
Chemical Oxygen Demand	--	--	mg/L	23.5	48.9	ND [20]	38.3	ND [20]	29.9	42.6
Hydroxide Alkalinity	--	--	mg/L	ND [5.0]	ND [1.0]	ND [5.0]	ND [1.0]	ND [2.0]	ND [2.0]	ND [2.0]
Nitrate/Nitrite Nitrogen	--	--	mg/L	0.011	ND [0.01]	0.01	ND [0.01]	0.017	0.039	0.043
Sulfate	--	--	mg/L	0.3	72.9	0.28	ND [0.2]	25	24.6	65.4
Total Alkalinity	--	--	mg/L	995	384	860	497	605	584	460
Total Organic Carbon	--	--	mg/L	29.9	4.4	14.1	6.3	10.9	12.9	6.5
Total Suspended Solids	--	--	mg/L	60.8	13.8	96.6	16.7	40.4	44.3	24.2

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POST-CLOSURE GROUNDWATER SAMPLING ANALYTICAL RESULTS SUMMARY

ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER SUPERFUND SITE
KING HIGHWAY LANDFILL OPERABLE UNIT

Sample ID: / Well ID: / Date Collected:	Generic GSI Values	Site Specific WQBEL	Units	H85175 MW-15AR 03/01/04	H85176 DUP [MW-15AR] 03/01/04	H85177 MW-3AR 03/01/04	H85178 MW-7 05/17/04	H85179 MW-1AR 05/18/04	H85180 MW-2R 05/18/04	H85181 MW-16A 05/18/04
VOCs										
Acetone	1,700	--	µg/L	ND [5.0]	ND [5.0]	ND [5.0]	NA	NA	NA	NA
SVOCs										
4-Methylphenol[6]	71	--	µg/L	ND [10]	ND [10]	ND [10]	ND [10]	ND [11]	ND [10]	ND [10]
Naphthalene	13	--	µg/L	ND [10]	ND [10]	ND [10]	ND [10]	ND [11]	ND [10]	ND [10]
Phenol	210	--	µg/L	ND [10]	ND [10]	ND [10]	NA	NA	NA	NA
PCBs										
Aroclor 1016	--	--	µg/L	ND [0.052]	ND [0.052]	ND [0.051]	ND [0.052]	ND [0.055]	ND [0.051]	ND [0.051]
Aroclor 1221	--	--	µg/L	ND [0.052]	ND [0.052]	ND [0.051]	ND [0.052]	ND [0.055]	ND [0.051]	ND [0.051]
Aroclor 1232	--	--	µg/L	ND [0.052]	ND [0.052]	ND [0.051]	ND [0.052]	ND [0.055]	ND [0.051]	ND [0.051]
Aroclor 1242	--	--	µg/L	ND [0.052]	ND [0.052]	ND [0.051]	ND [0.052]	ND [0.055]	ND [0.051]	ND [0.051]
Aroclor 1248	--	--	µg/L	ND [0.052]	ND [0.052]	ND [0.051]	ND [0.052]	ND [0.055]	ND [0.051]	ND [0.051]
Aroclor 1254	--	--	µg/L	ND [0.052]	ND [0.052]	ND [0.051]	ND [0.052]	ND [0.055]	ND [0.051]	ND [0.051]
Aroclor 1260	--	--	µg/L	ND [0.052]	ND [0.052]	ND [0.051]	ND [0.052]	ND [0.055]	ND [0.051]	ND [0.051]
Total PCBs	0.2	--	µg/L	ND	ND	ND	ND	ND	ND	ND
Metals										
Barium	--	2,300	µg/L	255	251	369	73.3 B	440	125 B	402
Calcium	--	--	µg/L	152,000	151,000	214,000	154,000	271,000	130,000	168,000
Chromium[7]	11	--	µg/L	ND [1.5]	ND [1.5]	ND [1.5]	NA	NA	NA	NA
Iron	--	--	µg/L	10,100	9,880	106,000	2,150	75,600	7,250	10,500
Sodium	--	--	µg/L	130,000	130,000	34,000	73,800	7,630	2,460 B	70,700
Thallium	3.7	160	µg/L	ND [4.2]	ND [4.2]	8.7 B	ND [3.4]	ND [3.4]	ND [4.2]	ND [3.4]
Zinc	--	1,200	µg/L	NA	NA	NA	NA	NA	NA	NA
Vanadium	12	--	µg/L	ND [2.2]	ND [2.2]	ND [2.2]	NA	NA	NA	NA
Miscellaneous										
Bicarbonate Alkalinity	--	--	mg/L	449	443	704	NA	NA	NA	NA
Carbonate Alkalinity	--	--	mg/L	ND [2.0]	ND [2.0]	ND [2.0]	NA	NA	NA	NA
Chemical Oxygen Demand	--	--	mg/L	34.1	25.6	44.7	ND [20]	40.5	21.4	38.3
Hydroxide Alkalinity	--	--	mg/L	ND [2.0]	ND [2.0]	ND [2.0]	NA	NA	NA	NA
Nitrate/Nitrite Nitrogen	--	--	mg/L	0.18	ND [0.01]	0.014	NA	NA	NA	NA
Sulfate	--	--	mg/L	81	71	23.7	NA	NA	NA	NA
Total Alkalinity	--	--	mg/L	449	443	704	NA	NA	NA	NA
Total Organic Carbon	--	--	mg/L	8.2	5.2	9.8	3.0	8.5	3.8	8.5
Total Suspended Solids	--	--	mg/L	21.1	21	39.6	NA	NA	NA	NA

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ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER SUPERFUND SITE
KING HIGHWAY LANDFILL OPERABLE UNIT

Sample ID: / Well ID: / Date Collected:	Generic GSI Values	Site Specific WQBEL	Units	H85182 MW-11RR 05/18/04	H85183 MW-12AR 05/19/04	H85184 MW-16B 05/19/04	H85185 Rinse Blank [MW-11RR] 05/19/04	H85186 MW-8BR 05/20/04	H85187 MW-8AR 05/20/04	H85188 DUP [MW-8AR] 05/20/04	H85189 MW-13AR 05/20/04	H85190 MW-13B 05/20/04
VOCs												
Acetone	1,700	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
SVOCs												
4-Methylphenol[6]	71	--	µg/L	ND [10]	ND [10]	ND [10]	ND [10]	ND [11]	ND [10]	ND [10]	ND [10]	ND [10]
Naphthalene	13	--	µg/L	ND [10]	ND [10]	ND [10]	ND [10]	ND [11]	ND [10]	ND [10]	ND [10]	ND [10]
Phenol	210	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCBs												
Aroclor 1016	--	--	µg/L	ND [0.051]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]
Aroclor 1221	--	--	µg/L	ND [0.051]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]
Aroclor 1232	--	--	µg/L	ND [0.051]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]
Aroclor 1242	--	--	µg/L	ND [0.051]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]
Aroclor 1248	--	--	µg/L	ND [0.051]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]
Aroclor 1254	--	--	µg/L	ND [0.051]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]
Aroclor 1260	--	--	µg/L	ND [0.051]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]
Total PCBs	0.2	--	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals												
Barium	--	2,300	µg/L	409	696	500	ND [4.9]	254	398	398	348	199 B
Calcium	--	--	µg/L	158,000	226,000	156,000	ND [164]	157,000	201,000	199,000	217,000	145,000
Chromium[7]	11	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	--	--	µg/L	4,660	35,800	8,820	34B	11,200	32,300	31,800	52,500	7,290
Sodium	--	--	µg/L	82,300	79,700	77,000	ND [315]	99,000	96,000	95,900	51,000	95,100
Thallium	3.7	160	µg/L	ND [3.4]	ND [3.4]	ND [3.4]	ND [3.4]	ND [3.4]	ND [3.4]	ND [6]	ND [3.8]	ND [3.6]
Zinc	--	1,200	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	12	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Miscellaneous												
Bicarbonate Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbonate Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chemical Oxygen Demand	--	--	mg/L	21.4	51.2 J	29.9	ND [20]	21.4	32	46.8	72.3	23.5
Hydroxide Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite Nitrogen	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	--	--	mg/L	5.7	23.3 J	9.8	ND [1.0]	5.2	11.2	11.1	9.9	3.1
Total Suspended Solids	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

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9. The WQBEL values are per the MDEQ Surface Water Quality Division, as recommended in a January 22, 1998 interoffice communication.

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UJ - The compound/analyte was not detected above the reported sample quantitation/detection limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation/detection.

POST-CLOSURE GROUNDWATER SAMPLING ANALYTICAL RESULTS SUMMARY

ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER SUPERFUND SITE
KING HIGHWAY LANDFILL OPERABLE UNIT

Sample ID: / Well ID: / Date Collected:	Generic GSI Values	Site Specific WQBEL	Units	H85191 MW-14AR 05/20/04	H85192 MW-12B 05/20/04	H85193 MW-15AR 05/21/04	H85194 DUP [MW-15AR] 05/21/04	H85195 MW-3AR 05/21/04	H85196 MW-7 08/02/04	H85197 MW-1AR 08/02/04	H85198 MW-2R 08/03/04	H85199 MW-11RR 08/03/04
VOCs												
Acetone	1,700	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
SVOCs												
4-Methylphenol[6]	71	--	µg/L	ND [10]	ND [10]	ND [10]	ND [10]	19	ND [10]	50	ND [10]	ND [10]
Naphthalene	13	--	µg/L	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]
Phenol	*210*	--	µg/L	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
PCBs												
Aroclor 1016	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.052]	ND [0.053]	ND [0.051]	ND [0.05]	ND [0.051]	ND [0.05]	ND [0.05]
Aroclor 1221	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.052]	ND [0.053]	ND [0.051]	ND [0.05]	ND [0.051]	ND [0.05]	ND [0.05]
Aroclor 1232	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.052]	ND [0.053]	ND [0.051]	ND [0.05]	ND [0.051]	ND [0.05]	ND [0.05]
Aroclor 1242	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.052]	ND [0.053]	ND [0.051]	ND [0.05]	ND [0.051]	ND [0.05]	ND [0.05]
Aroclor 1248	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.052]	ND [0.053]	ND [0.051]	ND [0.05]	ND [0.051]	ND [0.05]	ND [0.05]
Aroclor 1254	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.052]	ND [0.053]	ND [0.051]	ND [0.05]	ND [0.051]	ND [0.05]	ND [0.05]
Aroclor 1260	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.052]	ND [0.053]	ND [0.051]	ND [0.05]	ND [0.051]	ND [0.05]	ND [0.05]
Total PCBs	0.2	--	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals												
Barium	--	2,300	µg/L	248	252	242	274	358	74.6	391	214	409
Calcium	--	--	µg/L	137,000	126,000	140,000	159,000	148,000	152,000	245,000	166,000	155,000
Chromium[7]	11	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	--	--	µg/L	9,990	4,600	10,000	11,400	100,000	3,150	75,400	8,510	4,810
Sodium	--	--	µg/L	98,400	89,300	142,000	143,000	69,300	66,400 J	5,930 J	70,000 J	85,600 J
Thallium	3.7	160	µg/L	ND [3.4]	ND [3.4]	ND [3.4]	ND [3.4]	ND [6.7]	ND [6.3]	ND [6.3]	ND [6.3]	ND [6.3]
Zinc	--	1,200	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	12	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Miscellaneous												
Bicarbonate Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbonate Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chemical Oxygen Demand	--	--	mg/L	ND [20]	ND [20]	ND [20]	ND [20]	ND [20]	ND [20]	42	20	ND [20]
Hydroxide Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite Nitrogen	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	--	--	mg/L	5.6	2.3	5.3	4.6	11.4	2.9	12.9	3.7	6.2
Total Suspended Solids	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

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POST-CLOSURE GROUNDWATER SAMPLING ANALYTICAL RESULTS SUMMARY

ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER SUPERFUND SITE
KING HIGHWAY LANDFILL OPERABLE UNIT

Sample ID: / Well ID: / Date Collected:	Generic GSI Values	Site Specific WQBEL	Units	H85200 MW-16A 08/03/04	H85201 MW-16B 08/03/04	H85202 MW-12AR 08/04/04	H85203 MW-12B 08/04/04	H85204 MW-13AR 08/04/04	H85205 MW-13B 08/04/04	H85206 MW-8BR 08/05/04	H85207 MW-8AR 08/05/04	H85208 DUP [MW-8AR] 08/05/04
VOCs												
Acetone	1,700	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
SVOCs												
4-Methylphenol[6]	71	--	µg/L	ND [10]	ND [10]	9.0 J	10 UJ	10 UJ	10 UJ	ND [10]	ND [10]	ND [10]
Naphthalene	13	--	µg/L	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]
Phenol	210	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCBs												
Aroclor 1016	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.05]	ND [0.05]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]
Aroclor 1221	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.05]	ND [0.05]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]
Aroclor 1232	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.05]	ND [0.05]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]
Aroclor 1242	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.05]	0.059	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]
Aroclor 1248	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.05]	ND [0.05]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]
Aroclor 1254	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.05]	ND [0.05]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]
Aroclor 1260	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.05]	ND [0.05]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]
Total PCBs	0.2	--	µg/L	ND	ND	ND	ND	0.059	ND	ND	ND	ND
Metals												
Barium	--	2,300	µg/L	406	514	701	273	489	211	268	473	456
Calcium	--	--	µg/L	166,000	152,000	229,000	133,000	198,000	145,000	162,000	207,000	200,000
Chromium[7]	11	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	--	--	µg/L	10,600	8,560	36,000	5,160	62,300	7,990	11,400	23,500	22,500
Sodium	--	--	µg/L	73,100 J	81,100 J	86,900 J	93,000 J	60,500 J	93,800 J	96800 J	99,000	95,700 J
Thallium	3.7	160	µg/L	ND [6.3]	ND [6.3]	ND [6.3]	ND [6.3]	ND [6.3]	ND [6.3]	ND [6.3]	ND [6.3]	ND [6.3]
Zinc	--	1,200	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	12	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Miscellaneous												
Bicarbonate Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbonate Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chemical Oxygen Demand	--	--	mg/L	25.9	31.9	64.1 J	ND [20]	35.9	ND [20]	21.8	50	48
Hydroxide Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite Nitrogen	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	--	--	mg/L	8.0	9.6	21.9	2.0	10.3	2.9	5.2	14.1	13.7
Total Suspended Solids	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

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POST-CLOSURE GROUNDWATER SAMPLING ANALYTICAL RESULTS SUMMARY

ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER SUPERFUND SITE
KING HIGHWAY LANDFILL OPERABLE UNIT

Sample ID: / Well ID: / Date Collected:	Generic GSI Values	Site Specific WQBEL	Units	H85209 MW-14AR 08/05/04	H85210 MW-3AR 08/06/04	H85211 MW-15AR 08/06/04	H85212 DUP [MW-15AR] 08/06/04	H85213 Rinse Blank [MW-11RR] 08/06/04	H85214 MW-7 11/15/04	H85215 MW-1AR 11/15/04	H85216 MW-2R 11/16/04
VOCs											
Acetone	1,700	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
SVOCs											
4-Methylphenol[6]	71	--	µg/L	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]
Naphthalene	13	--	µg/L	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]
Phenol	210	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
PCBs											
Aroclor 1016	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.052]
Aroclor 1221	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.052]
Aroclor 1232	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.052]
Aroclor 1242	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.052]
Aroclor 1248	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.052]
Aroclor 1254	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.052]
Aroclor 1260	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.052]
Total PCBs	0.2	--	µg/L	ND	ND	ND	ND	ND	ND	ND	ND
Metals											
Barium	--	2,300	µg/L	263	208	258	249	12	74.3 B	257	187 B
Calcium	--	--	µg/L	145,000	156,000	151,000	146,000	332	150,000	148,000	141,000
Chromium[7]	11	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
Iron	--	--	µg/L	10,000	31,600	10,100	9,700	54	3,020	45,700	6,490
Sodium	--	--	µg/L	109,000 J	118,000 J	153,000 J	147,000 J	292 J	73,000 J	5,540 J	3,290 UJ
Thallium	3.7	160	µg/L	ND [6.3]	ND [6.3]	ND [6.3]	ND [6.3]	ND [6.3]	ND [5.3]	ND [5.3]	ND [5.3]
Zinc	--	1,200	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	12	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
Miscellaneous											
Bicarbonate Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Carbonate Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Chemical Oxygen Demand	--	--	mg/L	ND [20]	25.9	ND [20]	29.9	ND [20]	21.8 J	29.9 J	20 UJ
Hydroxide Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite Nitrogen	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Total Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	--	--	mg/L	5.3	4.9	4.2	4.1	ND [1.0]	2.3 J	7.2 J	3.5 J
Total Suspended Solids	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA

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ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER SUPERFUND SITE
KING HIGHWAY LANDFILL OPERABLE UNIT

Sample ID: / Well ID: / Date Collected:	Generic GSI Values	Site Specific WQBEL	Units	H85217 MW-11RR 11/16/04	H85218 MW-16A 11/16/04	H85219 MW-16B 11/16/04	H85220 MW-12B 11/16/04	H85221 MW-12AR 11/17/04	H85222 MW-13B 11/17/04	H85223 MW-13AR 11/17/04	H85224 MW-8BR 11/17/04	H85225 MW-8AR 11/17/04
VOCs												
Acetone	1,700	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
SVOCs												
4-Methylphenol[6]	71	--	µg/L	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]
Naphthalene	13	--	µg/L	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]
Phenol	210	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCBs												
Aroclor 1016	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.052]	ND [0.051]	ND [0.051]	ND [0.051]
Aroclor 1221	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.052]	ND [0.051]	ND [0.051]	ND [0.051]
Aroclor 1232	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.052]	ND [0.051]	ND [0.051]	ND [0.051]
Aroclor 1242	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.052]	ND [0.051]	ND [0.051]	ND [0.051]
Aroclor 1248	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.052]	ND [0.051]	ND [0.051]	ND [0.051]
Aroclor 1254	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.052]	ND [0.051]	ND [0.051]	ND [0.051]
Aroclor 1260	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.052]	ND [0.051]	ND [0.051]	ND [0.051]
Total PCBs	0.2	--	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals												
Barium	--	2,300	µg/L	426	435	512	280	753	225	517	266	453
Calcium	--	--	µg/L	154,000	168,000	147,000	132,000	232,000	150,000	214,000	150,000	191,000
Chromium[7]	11	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	--	--	µg/L	4,340	10,200	7,850	5,160	37,200	8,380	60,800	10,800	25,200
Sodium	--	--	µg/L	79,500 J	69,500 J	77,900 J	91,200 J	84,600 J	91,000 J	59,800 J	99,100 J	93,500 J
Thallium	3.7	160	µg/L	ND [5.3]	ND [5.3]	ND [5.3]	ND [5.3]	ND [5.3]	ND [5.3]	ND [5.3]	ND [5.3]	ND [5.3]
Zinc	--	1,200	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	12	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Miscellaneous												
Bicarbonate Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbonate Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chemical Oxygen Demand	--	--	mg/L	20 UJ	27.9 J	20 UJ	20 UJ	66.1 J	20 UJ	33.9 J	20 UJ	42 J
Hydroxide Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite Nitrogen	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	--	--	mg/L	4.6 J	7.9 J	6.4 J	2.0 J	19.3 J	3.4 J	10.1 J	4.2 J	9.5 J
Total Suspended Solids	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

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POST-CLOSURE GROUNDWATER SAMPLING ANALYTICAL RESULTS SUMMARY

ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER SUPERFUND SITE
KING HIGHWAY LANDFILL OPERABLE UNIT

Sample ID: / Well ID: / Date Collected:	Generic GSI Values	Site Specific WQBEL	Units	H85226 DUP [MW-8AR] 11/17/04	H85227 MW-15AR 11/18/04	H85228 DUP [MW-15AR] 11/18/04	H85229 MW-14AR 11/18/04	H85230 MW-3AR 11/18/04	H85231 Rinse Blank [MW-11RR] 11/18/04
VOCs									
Acetone	1,700	--	µg/L	NA	NA	NA	NA	NA	NA
SVOCs									
4-Methylphenol[6]	71	--	µg/L	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]
Naphthalene	13	--	µg/L	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]
Phenol	210	--	µg/L	NA	NA	NA	NA	NA	NA
PCBs									
Aroclor 1016	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]
Aroclor 1221	--	--	µg/L	ND [0.051]	0.085	0.060	ND [0.051]	ND [0.051]	ND [0.051]
Aroclor 1232	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]
Aroclor 1242	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]
Aroclor 1248	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]
Aroclor 1254	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]
Aroclor 1260	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]
Total PCBs	0.2	--	µg/L	ND	0.085	0.060	ND	ND	ND
Metals									
Barium	--	2,300	µg/L	435	270	275	283	342	ND [12.1]
Calcium	--	--	µg/L	186,000	156,000	158,000	155,000	166,000	ND [360]
Chromium[7]	11	--	µg/L	NA	NA	NA	NA	NA	NA
Iron	--	--	µg/L	24,400	10,700	10,800	10,900	78,600	ND [34.4]
Sodium	--	--	µg/L	89,800 J	118,000 J	119,000 J	105,000 J	60,900 J	238 UJ
Thallium	3.7	160	µg/L	ND [5.3]	ND [5.3]	ND [5.3]	ND [5.3]	ND [5.3]	ND [5.3]
Zinc	--	1,200	µg/L	NA	NA	NA	NA	NA	NA
Vanadium	12	--	µg/L	NA	NA	NA	NA	NA	NA
Miscellaneous									
Bicarbonate Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA
Carbonate Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA
Chemical Oxygen Demand	--	--	mg/L	27.9 J	20 UJ	20 UJ	20 UJ	29.9 J	20 UJ
Hydroxide Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite Nitrogen	--	--	mg/L	NA	NA	NA	NA	NA	NA
Sulfate	--	--	mg/L	NA	NA	NA	NA	NA	NA
Total Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA
Total Organic Carbon	--	--	mg/L	10 J	4.1 J	4.5 J	4.0 J	7.1 J	1.0 UJ
Total Suspended Solids	--	--	mg/L	NA	NA	NA	NA	NA	NA

Notes:

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TABLE 1

POST-CLOSURE GROUNDWATER SAMPLING ANALYTICAL RESULTS SUMMARY

ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER SUPERFUND SITE
KING HIGHWAY LANDFILL OPERABLE UNIT

Sample ID: / Well ID: / Date Collected:	Generic GSI Values	Site Specific WQBEL	Units	H85232 MW-2R 02/07/05	H85233 MW-7 02/07/05	H85234 MW-1AR 02/07/05	H85235 MW-11RR 02/08/05	H85236 Rinse Blank [MW-11RR] 02/08/05	H85237 MW-16B 02/08/05	H85238 MW-16A 02/08/05
VOCs										
Acetone	1,700	--	µg/L	ND [5]	ND [5]	5.3	5.3	ND [5.0]	1.7 J	3.0 J
SVOCs										
4-Methylphenol[6]	71	--	µg/L	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ
Naphthalene	13	--	µg/L	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]
Phenol	210	--	µg/L	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ
PCBs										
Aroclor 1016	--	--	µg/L	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.052]
Aroclor 1221	--	--	µg/L	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.052]
Aroclor 1232	--	--	µg/L	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.052]
Aroclor 1242	--	--	µg/L	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.052]
Aroclor 1248	--	--	µg/L	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.052]
Aroclor 1254	--	--	µg/L	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.052]
Aroclor 1260	--	--	µg/L	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.052]
Total PCBs	0.2	--	µg/L	ND	ND	ND	ND	ND	ND	ND
Metals										
Barium	--	2,300	µg/L	136 B	70.4 B	373	408	ND [3.5]	482	409
Calcium	--	--	µg/L	128,000	161,000	214,000	155,000	ND [87]	145,000	170,000
Chromium[7]	11	--	µg/L	ND [1.1]	1.3 B	1.7 B	1.2 B	ND [1.1]	1.4 B	ND [1.1]
Iron	--	--	µg/L	4,790	3,010	69,600	3,950	ND [52.5]	7,880	10,600
Sodium	--	--	µg/L	4,110 B	65,200	7,940	86,200	ND [5,000]	75,300	72,000
Thallium	3.7	160	µg/L	ND [7]	ND [7]	ND [7]	ND [7]	ND [7]	ND [7]	ND [7]
Zinc	--	1,200	µg/L	NA	NA	NA	NA	NA	NA	NA
Vanadium	12	--	µg/L	ND [1.4]	ND [1.4]	ND [1.4]	ND [1.4]	ND [1.4]	ND [1.4]	ND [1.4]
Miscellaneous										
Bicarbonate Alkalinity	--	--	mg/L	386	416	789	463	3.9	495	521
Carbonate Alkalinity	--	--	mg/L	ND [1.0]	ND [1.0]	ND [1.0]	ND [1.0]	ND [1.0]	ND [1.0]	ND [1.0]
Chemical Oxygen Demand	--	--	mg/L	ND [20]	25.9	33.9	31.9	29.9	31.9	27.9
Hydroxide Alkalinity	--	--	mg/L	ND [1.0]	ND [1.0]	ND [1.0]	ND [1.0]	ND [1.0]	ND [1.0]	ND [1.0]
Nitrate/Nitrite Nitrogen	--	--	mg/L	0.045	0.32	ND [0.01]	0.029	0.018	0.065	0.14
Sulfate	--	--	mg/L	14.4	166	3.4	67.6	ND [0.2]	43.5	87.7
Total Alkalinity	--	--	mg/L	386	416	789	463	3.9	495	521
Total Organic Carbon	--	--	mg/L	2.5	2.9	7.6	6	ND [1.0]	8	8.6
Total Suspended Solids	--	--	mg/L	10.7	36.3	119	12	ND [0.5]	22	24

Notes:

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POST-CLOSURE GROUNDWATER SAMPLING ANALYTICAL RESULTS SUMMARY

ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER SUPERFUND SITE
KING HIGHWAY LANDFILL OPERABLE UNIT

Sample ID:				H85239	H85240	H85241	H85242	H85243	H85244	H85245
Well ID:		Site Specific		MW-12B	MW-13B	MW-12AR	MW-13AR	MW-8AR	DUP [MW-8AR]	MW-8BR
Date Collected:	Generic GSI Values	WQBEL	Units	02/09/05	02/09/05	02/09/05	02/09/05	02/10/05	02/10/05	02/10/05
VOCs										
Acetone	1,700	--	µg/L	ND [5.0]	1.6 J	1.9 J	ND [5.0]	1.7 J	ND [5.0]	ND [5.0]
SVOCs										
4-Methylphenol[6]	71	--	µg/L	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ
Naphthalene	13	--	µg/L	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]
Phenol	210	--	µg/L	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ
PCBs										
Aroclor 1016	--	--	µg/L	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]
Aroclor 1221	--	--	µg/L	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]
Aroclor 1232	--	--	µg/L	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]
Aroclor 1242	--	--	µg/L	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]
Aroclor 1248	--	--	µg/L	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]
Aroclor 1254	--	--	µg/L	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]
Aroclor 1260	--	--	µg/L	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]
Total PCBs	0.2	--	µg/L	ND	ND	ND	ND	ND	ND	ND
Metals										
Barium	--	2,300	µg/L	262	186 B	654	487	385	389	245
Calcium	--	--	µg/L	129,000	138,000	215,000	196,000	171,000	172,000	151,000
Chromium[7]	11	--	µg/L	ND [1.1]	ND [1.1]	1.4 B	1.8 B	1.2 B	ND [1.1]	ND [1.1]
Iron	--	--	µg/L	4,930	6,400	31,700	60,400	25,300	25,600	10,100
Sodium	--	--	µg/L	89,200	92,200	80,600	48,700	92,100	93,100	93,700
Thallium	3.7	160	µg/L	ND [7]	ND [7]	ND [7]	ND [7]	ND [7]	ND [7]	ND [7]
Zinc	--	1,200	µg/L	NA	NA	NA	NA	NA	NA	NA
Vanadium	12	--	µg/L	ND [1.4]	ND [1.4]	ND [1.4]	ND [1.4]	ND [1.4]	ND [1.4]	ND [1.4]
Miscellaneous										
Bicarbonate Alkalinity	--	--	mg/L	367	402	1,700	656	563	567	469
Carbonate Alkalinity	--	--	mg/L	ND [1.0]	ND [1.0]	ND [2.0]	ND [1.0]	ND [1.0]	ND [1.0]	ND [1.0]
Chemical Oxygen Demand	--	--	mg/L	ND [20]	ND [20]	46.7	25.1	ND [20]	ND [20]	ND [20]
Hydroxide Alkalinity	--	--	mg/L	ND [1.0]	ND [1.0]	ND [2.0]	ND [1.0]	ND [1.0]	ND [1.0]	ND [1.0]
Nitrate/Nitrite Nitrogen	--	--	mg/L	0.025	0.017	0.064	0.083	0.014 J	0.025 J	0.028
Sulfate	--	--	mg/L	86.9	84.6	1.2 J	6.5	34.4	30.1	69.3
Total Alkalinity	--	--	mg/L	367	402	1,700	656	563	567	469
Total Organic Carbon	--	--	mg/L	1.8	2.7	17.4	8.2	8.3	8.7	4.4
Total Suspended Solids	--	--	mg/L	11.4	13.8	81.6	29	49.8	47.8	17.4

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ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER SUPERFUND SITE
KING HIGHWAY LANDFILL OPERABLE UNIT

Sample ID: / Well ID: / Date Collected:	Generic GSI Values	Site Specific WQBEL	Units	H85246 MW-14AR 02/10/05	H85247 MW-15AR 02/11/05	H85248 DUP [MW-15AR] 02/11/05	H85249 MW-3AR 02/11/05
VOCs							
Acetone	1,700	--	µg/L	2.0 J	ND [5.0]	ND [5.0]	ND [5.0]
SVOCs							
4-Methylphenol[6]	71	--	µg/L	10 UJ	10 UJ	10 UJ	10 UJ
Naphthalene	13	--	µg/L	ND [10]	ND [10]	ND [10]	ND [10]
Phenol	210	--	µg/L	10 UJ	10 UJ	10 UJ	10 UJ
PCBs							
Aroclor 1016	--	--	µg/L	ND [0.05]	ND [0.053]	ND [0.053]	ND [0.051]
Aroclor 1221	--	--	µg/L	ND [0.05]	ND [0.053]	ND [0.053]	ND [0.051]
Aroclor 1232	--	--	µg/L	ND [0.05]	ND [0.053]	ND [0.053]	ND [0.051]
Aroclor 1242	--	--	µg/L	ND [0.05]	ND [0.053]	ND [0.053]	ND [0.051]
Aroclor 1248	--	--	µg/L	ND [0.05]	ND [0.053]	ND [0.053]	ND [0.051]
Aroclor 1254	--	--	µg/L	ND [0.05]	ND [0.053]	ND [0.053]	ND [0.051]
Aroclor 1260	--	--	µg/L	ND [0.05]	ND [0.053]	ND [0.053]	ND [0.051]
Total PCBs	0.2	--	µg/L	ND	ND	ND	ND
Metals							
Barium	--	2,300	µg/L	256	266	267	255
Calcium	--	--	µg/L	145,000	162,000	162,000	164,000
Chromium[7]	11	--	µg/L	ND [1.1]	ND [1.1]	ND [1.1]	ND [1.1]
Iron	--	--	µg/L	9,960	10,600	10,600	81,100
Sodium	--	--	µg/L	122,000	136,000	136,000	19,100
Thallium	3.7	160	µg/L	ND [7]	ND [7]	ND [7]	ND [7]
Zinc	--	1,200	µg/L	NA	NA	NA	NA
Vanadium	12	--	µg/L	ND [1.4]	ND [1.4]	ND [1.4]	ND [1.4]
Miscellaneous							
Bicarbonate Alkalinity	--	--	mg/L	437	433	434	542
Carbonate Alkalinity	--	--	mg/L	ND [1.0]	ND [1.0]	ND [1.0]	ND [1.0]
Chemical Oxygen Demand	--	--	mg/L	ND [20]	32.9	31	36.9
Hydroxide Alkalinity	--	--	mg/L	ND [1.0]	ND [1.0]	ND [1.0]	ND [1.0]
Nitrate/Nitrite Nitrogen	--	--	mg/L	0.083	1.7 J	0.031 J	0.052 J
Sulfate	--	--	mg/L	78.9	109	96.7	12.1
Total Alkalinity	--	--	mg/L	437	433	434	542
Total Organic Carbon	--	--	mg/L	4.2	3.5	3.7	5.7
Total Suspended Solids	--	--	mg/L	21.2	22.6	16.5	33.6

Notes:

1. Exceedances of the Groundwater Surface Water Interface (GSI) and/or Waster Quality-Based Effluent Limits (WQBEL) values, where applicable, are indicated by shading.
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3. NA - Not analyzed.
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7. Total Chromium is being analyzed, but the GSI Value refers to Chromium (VI) oxidation state.
8. The Generic GSI Values are obtained from the KHL-OU Hydrogeologic Monitoring Plan (September 2002).
9. The WQBEL values are per the MDEQ Surface Water Quality Division, as recommended in a January 22, 1998 interoffice communication.

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UJ - The compound/analyte was not detected above the reported sample quantitation/detection limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation/detection.

TABLE 1

POST-CLOSURE GROUNDWATER SAMPLING ANALYTICAL RESULTS SUMMARY

ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER SUPERFUND SITE
KING HIGHWAY LANDFILL OPERABLE UNIT

Sample ID: / Well ID: / Date Collected:	Generic GSI Values	Site Specific WQBEL	Units	H85250 MW-7 05/23/05	H85251 MW-2R 05/23/05	H85252 MW-16A 05/24/05	H85253 MW-1AR 05/24/05	H85254 MW-11RR 05/24/05	H85255 MW-16B 05/24/05	H85256 MW-12B 05/24/05	H85257 MW-12AR 05/24/05	H85258 Equip. Blank [MW-11RR] 05/24/05
VOCs												
Acetone	1,700	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
SVOCs												
4-Methylphenol[6]	71	--	µg/L	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [9.9]	ND[10]
Naphthalene	13	--	µg/L	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [9.9]	ND[10]
Phenol	210	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCBs												
Aroclor 1016	--	--	µg/L	ND [0.051]	ND [0.053]	ND [0.052]	ND [0.051]	ND [0.052]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]
Aroclor 1221	--	--	µg/L	ND [0.051]	ND [0.053]	ND [0.052]	ND [0.051]	ND [0.052]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]
Aroclor 1232	--	--	µg/L	ND [0.051]	ND [0.053]	ND [0.052]	ND [0.051]	ND [0.052]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]
Aroclor 1242	--	--	µg/L	ND [0.051]	ND [0.053]	ND [0.052]	ND [0.051]	ND [0.052]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]
Aroclor 1248	--	--	µg/L	ND [0.051]	ND [0.053]	ND [0.052]	ND [0.051]	ND [0.052]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]
Aroclor 1254	--	--	µg/L	ND [0.051]	ND [0.053]	ND [0.052]	ND [0.051]	ND [0.052]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]
Aroclor 1260	--	--	µg/L	ND [0.051]	ND [0.053]	ND [0.052]	ND [0.051]	ND [0.052]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]
Total PCBs	0.2	--	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals												
Barium	--	2,300	µg/L	72.2 B	199 B	468	447	432	580	297	707	ND [8.4]
Calcium	--	--	µg/L	169,000	164,000	186,000	221,000	164,000	170,000	142,000	233,000	ND [211]
Chromium[7]	11	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	--	--	µg/L	1,440	12,000	12,000	93,200	5,240	9,380	5,210	35,500	37.9 UJ
Sodium	--	--	µg/L	64,600 J	103,000 J	76,000 J	2,760 JB	82,400 J	84,800 J	97,100 J	85,600 J	488 UJ
Thallium	3.7	160	µg/L	ND [6.4]	ND [6.4]	ND [6.4]	ND [6.4]	ND [6.4]	ND [6.4]	ND [6.4]	ND [6.4]	ND [6.4]
Zinc	--	1,200	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	12	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Miscellaneous												
Bicarbonate Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbonate Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chemical Oxygen Demand	--	--	mg/L	25.1	31	25.1	40.8	32.9	31	23.1	64.4 J	25.1
Hydroxide Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite Nitrogen	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	--	--	mg/L	3.6	4.5	8.4	5.2	5.3	8.5	3.5	20.3	ND [1]
Total Suspended Solids	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

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POST-CLOSURE GROUNDWATER SAMPLING ANALYTICAL RESULTS SUMMARY

ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER SUPERFUND SITE
KING HIGHWAY LANDFILL OPERABLE UNIT

Sample ID: / Well ID: / Date Collected:	Generic GSI Values	Site Specific WQBEL	Units	H85259 MW-8BR 05/25/05	H85260 MW-13B 05/25/05	H85261 MW-8AR 05/25/05	H85262 DUP [MW-8AR] 05/25/05	H85263 MW-13AR 05/25/05	H85264 MW-14AR 05/26/05	H85265 MW-15AR 05/26/05	H85266 DUP [MW-15AR] 05/26/05	H85267 MW-3AR 05/26/05
VOCs												
Acetone	1,700	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
SVOCs												
4-Methylphenol[β]	71	--	µg/L	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [9.9]	ND [9.9]	ND [10]	ND [10]
Naphthalene	13	--	µg/L	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [9.9]	ND [9.9]	ND [10]	ND [10]
Phenol	210	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCBs												
Aroclor 1016	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.052]	ND [0.051]	ND [0.051]	ND [0.051]
Aroclor 1221	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.052]	0.072	ND [0.051]	ND [0.051]
Aroclor 1232	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.052]	ND [0.051]	0.069	ND [0.051]
Aroclor 1242	--	--	µg/L	ND [0.051]	ND [0.051]	0.051 UJ	0.2 J	ND [0.051]	ND [0.052]	ND [0.051]	ND [0.051]	0.045 J
Aroclor 1248	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.052]	ND [0.051]	ND [0.051]	ND [0.051]
Aroclor 1254	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.052]	ND [0.051]	ND [0.051]	ND [0.051]
Aroclor 1260	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.052]	ND [0.051]	ND [0.051]	ND [0.051]
Total PCBs	0.2	--	µg/L	ND	ND	0.051 UJ	0.2 J	ND	ND	0.072	0.069	0.045 J
Metals												
Barium	--	2,300	µg/L	295	215	415	414	429	284	301	291	193 B
Calcium	--	--	µg/L	174,000	150,000	183,000	182,000	191,000	158,000	171,000	167,000	160,000
Chromium[7]	11	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	--	--	µg/L	13,800	7,520	22,300	22,300	50,700	10,900	11,800	11,500	28,000
Sodium	--	--	µg/L	98,000 J	99,600 J	96,200 J	95,700 J	69,300 J	106,000 J	147,000 J	143,000 J	142,000 J
Thallium	3.7	160	µg/L	ND [6.4]	ND [6.4]	ND [6.4]	ND [6.4]	ND [6.4]	ND [6.4]	ND [6.4]	ND [6.4]	ND [6.4]
Zinc	--	1,200	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	12	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Miscellaneous												
Bicarbonate Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbonate Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chemical Oxygen Demand	--	--	mg/L	25.1	ND [20]	36.9	58.5	36.9	ND [20]	29	36.9	29
Hydroxide Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite Nitrogen	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	--	--	mg/L	5.2	3.5	10.2	9.9	10	4.6	4.5	7.2	5
Total Suspended Solids	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

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ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER SUPERFUND SITE
KING HIGHWAY LANDFILL OPERABLE UNIT

Sample ID: / Well ID: / Date Collected:	Generic GSI Values	Site Specific WQBEL	Units	H85268 MW-7 08/15/05	H85269 MW-1AR 08/15/05	H85270 MW-2R 08/16/05	H85271 MW-11RR 08/16/05	H85272 MW-16A 08/16/05	H85273 Equip. Blank [MW-11RR] 08/16/05	H85274 MW-16B 08/18/05	H85275 MW-12AR 08/17/05	H85276 MW-12B 08/17/05	H85277 MW-13B 08/17/05
VOCs													
Acetone	1,700	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SVOCs													
4-Methylphenol[8]	71	--	µg/L	ND [11]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [11]
Naphthalene	13	--	µg/L	ND [11]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [11]
Phenol	210	--	µg/L	NA	NA	NA	NA	NA	NA	10 UJ	10 UJ	10 UJ	11 UJ
PCBs													
Aroclor 1016	--	--	µg/L	ND [0.052]	ND [0.051]	ND [0.051]	ND [0.052]	ND [0.05]	ND [0.052]	ND [0.05]	ND [0.051]	ND [0.051]	0.053 UJ
Aroclor 1221	--	--	µg/L	ND [0.052]	ND [0.051]	ND [0.051]	ND [0.052]	ND [0.05]	ND [0.052]	ND [0.05]	ND [0.051]	ND [0.051]	0.053 UJ
Aroclor 1232	--	--	µg/L	ND [0.052]	ND [0.051]	ND [0.051]	ND [0.052]	ND [0.05]	ND [0.052]	ND [0.05]	ND [0.051]	0.035 J	0.053 UJ
Aroclor 1242	--	--	µg/L	ND [0.052]	ND [0.051]	ND [0.051]	ND [0.052]	ND [0.05]	ND [0.052]	ND [0.05]	ND [0.051]	ND [0.051]	0.053 UJ
Aroclor 1248	--	--	µg/L	ND [0.052]	ND [0.051]	ND [0.051]	ND [0.052]	ND [0.05]	ND [0.052]	ND [0.05]	ND [0.051]	ND [0.051]	0.053 UJ
Aroclor 1254	--	--	µg/L	ND [0.052]	ND [0.051]	ND [0.051]	ND [0.052]	ND [0.05]	ND [0.052]	ND [0.05]	ND [0.051]	ND [0.051]	0.053 UJ
Aroclor 1260	--	--	µg/L	ND [0.052]	ND [0.051]	ND [0.051]	ND [0.052]	ND [0.05]	ND [0.052]	ND [0.05]	ND [0.051]	ND [0.051]	0.053 UJ
Total PCBs	0.2	--	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	0.035 J	ND
Metals													
Barium	--	2,300	µg/L	73.7 B	352	177 B	405	418	ND (11.6)	488	701	284	216
Calcium	--	--	µg/L	153,000	164,000	151,000	148,000	164,000	328 B	147,000	223,000	136,000	141,000
Chromium[7]	11	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	--	--	µg/L	3,290 J	63,900 J	10,100 J	5,220 J	10,000 J	32.4 UJ	7,490 J	34,600 J	5,290 J	7,940 J
Sodium	--	--	µg/L	68,600	5,710	108,000	81,100	74,800	712 B	79,300	81,600	93,000	93,200
Thallium	3.7	160	µg/L	ND [8.5]	ND [8.5]	ND [8.5]	ND [8.5]	ND [8.5]	ND [8.5]	ND [8.5]	ND [8.5]	ND [8.5]	ND [8.5]
Zinc	--	1,200	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	12	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Miscellaneous													
Bicarbonate Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbonate Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chemical Oxygen Demand	--	--	mg/L	46.7	38.8	25.1	32.9	31	20	32.9	64.4	ND [20]	29
Hydroxide Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite Nitrogen	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	--	--	mg/L	2.8	5.4	2.8	3.8	6	1	5.9	19.3 J	2.1	2.4
Total Suspended Solids	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

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ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER SUPERFUND SITE
KING HIGHWAY LANDFILL OPERABLE UNIT

Sample ID: / Well ID: / Date Collected:	Generic GSI Values	Site Specific WQBEL	Units	H85278 MW-8AR 08/17/05	H85279 DUP [MW-8AR] 08/17/05	H85280 MW-13AR 08/18/05	H85281 MW-8BR 08/17/05	H85282 MW-15AR 08/18/05	H85283 DUP [MW-15AR] 08/18/05	H85284 MW-14AR 08/18/05	H85285 MW-3AR 08/18/05
VOCs											
Acetone	1,700	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
SVOCs											
4-Methylphenol[6]	71	--	µg/L	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]
Naphthalene	13	--	µg/L	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]
Phenol	210	--	µg/L	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ
PCBs											
Aroclor 1016	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.052]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.05]	ND [0.05]
Aroclor 1221	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.052]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.05]	ND [0.05]
Aroclor 1232	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.052]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.05]	0.03 J
Aroclor 1242	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.052]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.05]	ND [0.05]
Aroclor 1248	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.052]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.05]	ND [0.05]
Aroclor 1254	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.052]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.05]	ND [0.05]
Aroclor 1260	--	--	µg/L	ND [0.051]	ND [0.051]	ND [0.052]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.05]	ND [0.05]
Total PCBs	0.2	--	µg/L	ND	ND	ND	ND	ND	ND	ND	0.03 J
Metals											
Barium	--	2,300	µg/L	399	395	426	278	248	253	264	211
Calcium	--	--	µg/L	172,000	170,000	183,000	154,000	143,000	146,000	146,000	152,000
Chromium[7]	11	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
Iron	--	--	µg/L	29,800 J	29,700 J	45,900 J	12,200 J	9,500 J	9,660 J	10,300 J	15,700 J
Sodium	--	--	µg/L	76,600	76,000	70,400	96,800	164,000	157,000	136,000	214,000
Thallium	3.7	160	µg/L	ND [8.5]	ND [8.5]	ND [8.5]	ND [8.5]	ND [8.5]	ND [8.5]	ND [8.5]	ND [8.5]
Zinc	--	1,200	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	12	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
Miscellaneous											
Bicarbonate Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Carbonate Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Chemical Oxygen Demand	--	--	mg/L	31	34.9	42.8	27	ND [20]	ND [20]	ND [20]	31
Hydroxide Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite Nitrogen	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Total Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	--	--	mg/L	8.2	8.6	8.5	4.2	3.9	3.4	3.8	3.2
Total Suspended Solids	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

1. Exceedances of the Groundwater Surface Water Interface (GSI) and/or Waster Quality-Based Effluent Limits (WQBEL) values, where applicable, are indicated by shading.
2. ND - Not detected. Practical quantitation limits are shown in brackets.
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8. The Generic GSI Values are obtained from the KHL-OU Hydrogeologic Monitoring Plan (September 2002).
9. The WQBEL values are per the MDEQ Surface Water Quality Division, as recommended in a January 22, 1998 interoffice communication.

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UJ - The compound/analyte was not detected above the reported sample quantitation/detection limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation/detection.

POST-CLOSURE GROUNDWATER SAMPLING ANALYTICAL RESULTS SUMMARY

ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER SUPERFUND SITE
KING HIGHWAY LANDFILL OPERABLE UNIT

Sample ID: / Well ID: / Date Collected:	Generic GSI Values	Site Specific WQBEL	Units	H85286 MW-1AR 11/08/05	H85287 MW-2R 11/08/05	H85288 MW-7 11/08/05	H85289 MW-11RR 11/08/05	H85290 Equip. Blank [MW-11RR] 11/08/05	H85291 MW-12B 11/09/05	H85292 MW-16A 11/09/05	H85293 MW-12AR 11/09/05	H85294 MW-16B 11/09/05
VOCs												
Acetone	1,700	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
SVOCs												
4-Methylphenol[6]	71	--	µg/L	ND [10]	ND [11]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]
Naphthalene	13	--	µg/L	ND [10]	ND [11]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]
Phenol	210	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCBs												
Aroclor 1016	--	--	µg/L	ND [0.05]	ND [0.051]	ND [0.052]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.051]	ND [0.05]
Aroclor 1221	--	--	µg/L	ND [0.05]	ND [0.051]	ND [0.052]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.051]	ND [0.05]
Aroclor 1232	--	--	µg/L	ND [0.05]	ND [0.051]	ND [0.052]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.051]	ND [0.05]
Aroclor 1242	--	--	µg/L	ND [0.05]	ND [0.051]	ND [0.052]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.051]	ND [0.05]
Aroclor 1248	--	--	µg/L	ND [0.05]	ND [0.051]	ND [0.052]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.051]	ND [0.05]
Aroclor 1254	--	--	µg/L	ND [0.05]	ND [0.051]	ND [0.052]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.051]	ND [0.05]
Aroclor 1260	--	--	µg/L	ND [0.05]	ND [0.051]	ND [0.052]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.051]	ND [0.05]
Total PCBs	0.2	--	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals												
Barium	--	2,300	µg/L	341	217	ND [76.4]	472	ND [15.3]	297	497	751	519
Calcium	--	--	µg/L	161,000	172,000	155,000	171,000	ND [513]	142,000	193,000	237,000	159,000
Chromium[7]	11	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	--	--	µg/L	59,400	12,800	4,190	6,610	ND [84.3]	5,660	10,700	37,800	7,830
Sodium	--	--	µg/L	5,500	90,400	93,900	81,400	ND [649]	94,500	73,800	85,600	79,800
Thallium	3.7	160	µg/L	ND [11.2]	ND [7.4]	ND [7.4]	ND [7.4]	ND [7.4]	ND [7.4]	ND [4.6]	ND [4.6]	ND [4.6]
Zinc	--	1,200	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	1.2	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Miscellaneous												
Bicarbonate Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbonate Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chemical Oxygen Demand	--	--	mg/L	29.8 J	35.7 J	25.8 J	23.8 J	20 UJ	20 UJ	27.8 J	67.6 J	25.8 J
Hydroxide Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite Nitrogen	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	--	--	mg/L	8.2 J	4.7 J	3.4 J	6.5 J	ND [1.0]	2.8 J	8.5 J	26 J	8.3 J
Total Suspended Solids	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

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POST-CLOSURE GROUNDWATER SAMPLING ANALYTICAL RESULTS SUMMARY

ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER SUPERFUND SITE
KING HIGHWAY LANDFILL OPERABLE UNIT

Sample ID: / Well ID: / Date Collected:	Generic GSI Values	Site Specific WQBEL	Units	H85295 MW-13B 11/10/05	H85296 MW-8BR 11/10/05	H85297 MW-8AR 11/10/05	H85298 DUP [MW-8AR] 11/10/05	H85299 MW-13AR 11/10/05	H85300 MW-15AR 11/11/05	H85301 DUP [MW-15AR] 11/11/05	H85302 MW-14AR 11/11/05	H85303 MW-3AR 11/11/05
VOCs												
Acetone	1,700	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
SVOCs												
4-Methylphenol[6]	71	--	µg/L	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]
Naphthalene	13	--	µg/L	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]
Phenol	210	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCBs												
Aroclor 1016	--	--	µg/L	ND [0.05]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.053]	ND [0.05]
Aroclor 1221	--	--	µg/L	ND [0.05]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.053]	ND [0.05]
Aroclor 1232	--	--	µg/L	ND [0.05]	ND [0.051]	0.15 JN	0.15 JN	ND [0.05]	0.053 JN	0.053 JN	ND [0.053]	ND [0.05]
Aroclor 1242	--	--	µg/L	ND [0.05]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.053]	ND [0.05]
Aroclor 1248	--	--	µg/L	ND [0.05]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.053]	ND [0.05]
Aroclor 1254	--	--	µg/L	ND [0.05]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.053]	ND [0.05]
Aroclor 1260	--	--	µg/L	ND [0.05]	ND [0.051]	ND [0.051]	ND [0.051]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.053]	ND [0.05]
Total PCBs	0.2	--	µg/L	ND	ND	0.15 JN	0.15 JN	ND	0.053 JN	0.053 JN	ND	ND
Metals												
Barium	--	2,300	µg/L	220	302	402	417	434	256	256	273	204
Calcium	--	--	µg/L	144,000	164,000	169,000	176,000	186,000	146,000	147,000	154,000	149,000
Chromium[7]	11	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	--	--	µg/L	8,220	11,800	18,400	19,100	43,400	10,400	10,100	11,300	11,900
Sodium	--	--	µg/L	110,000	134,000	119,000	126,000	78,900	119,000	143,000	118,000	204,000
Thallium	3.7	160	µg/L	ND [4.6]	ND [4.6]	ND [4.6]	ND [4.6]	ND [4.6]	ND [7.4]	ND [7.4]	ND [7.4]	ND [7.4]
Zinc	--	1,200	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	1.2	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Miscellaneous												
Bicarbonate Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbonate Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chemical Oxygen Demand	--	--	mg/L	27.8 J	21.8 J	33.7 J	29.8 J	35.7 J	20 UJ	23.8 J	20 UJ	20 UJ
Hydroxide Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite Nitrogen	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	--	--	mg/L	3.6 J	5.4 J	9.6 J	9.8 J	10 J	5.3 J	5.2 J	5.1 J	4.7 J
Total Suspended Solids	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

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POST-CLOSURE GROUNDWATER SAMPLING ANALYTICAL RESULTS SUMMARY

ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER SUPERFUND SITE
KING HIGHWAY LANDFILL OPERABLE UNIT

Sample ID: / Well ID: / Date Collected:	Generic GSI Values	Site Specific WQBEL	Units	H85304 MW-2R 02/08/06	H85305 MW-1AR 02/08/06	H85306 MW-7 02/08/06	H85307 Equip. Blank [MW-11RR] 02/08/06	H85308 MW-11RR 02/08/06	H85309 MW-12AR 02/09/06	H85310 MW-12B 02/09/06	H85311 MW-16A 02/09/06	H85312 MW-16B 02/09/06
VOCs												
Acetone	1,700	--	µg/L	ND [5]	ND [5]	ND [5]	ND [5]	ND [5]	ND [5]	ND [5]	ND [5]	ND [5]
SVOCs												
4-Methylphenol[6]	71	--	µg/L	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]
Naphthalene	13	--	µg/L	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]
Phenol	210	--	µg/L	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]
PCBs												
Aroclor 1016	--	--	µg/L	ND [0.05]	ND [0.05]	ND [0.051]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.052]	ND [0.05]	ND [0.05]
Aroclor 1221	--	--	µg/L	ND [0.05]	ND [0.05]	ND [0.051]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.052]	ND [0.05]	ND [0.05]
Aroclor 1232	--	--	µg/L	ND [0.05]	ND [0.05]	ND [0.051]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.052]	ND [0.05]	ND [0.05]
Aroclor 1242	--	--	µg/L	ND [0.05]	ND [0.05]	ND [0.051]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.052]	ND [0.05]	ND [0.05]
Aroclor 1248	--	--	µg/L	ND [0.05]	ND [0.05]	ND [0.051]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.052]	ND [0.05]	ND [0.05]
Aroclor 1254	--	--	µg/L	ND [0.05]	ND [0.05]	ND [0.051]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.052]	ND [0.05]	ND [0.05]
Aroclor 1260	--	--	µg/L	ND [0.05]	ND [0.05]	ND [0.051]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.052]	ND [0.05]	ND [0.05]
Total PCBs	0.2	--	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals												
Barium	--	2,300	µg/L	204	382	81.1 B	ND [6]	445	706	295	462	539
Calcium	--	--	µg/L	136,000	207,000	180,000	ND [331]	162,000	221,000	140,000	178,000	162,000
Chromium[7]	11	--	µg/L	ND [1.5]	ND [1.5]	ND [1.5]	ND [1.5]	2 B	ND [1.5]	ND [1.5]	1.8 B	ND [1.5]
Iron	--	--	µg/L	8,120	73,000	4,160	ND [54.3]	4,850	33,000	5,360	10,800	8,100
Sodium	--	--	µg/L	25,700	6,010	76,300	ND [589]	83,400	90,100	92,200	70,100	77,500
Thallium	3.7	160	µg/L	ND [8.2]	ND [8.2]	ND [8.2]	ND [8.2]	ND [8.2]	ND [8.2]	ND [8.2]	ND [8.2]	ND [8.2]
Zinc	--	1,200	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	1.2	--	µg/L	ND [2.5]	ND [2.5]	ND [2.5]	ND [2.5]	ND [2.5]	ND [2.5]	ND [2.5]	ND [2.5]	ND [2.5]
Miscellaneous												
Bicarbonate Alkalinity	--	--	mg/L	384	679	479	3.4	511	842	382	516	475
Carbonate Alkalinity	--	--	mg/L	ND [1]	ND [1]	ND [1]	ND [1]	ND [1]	ND [2]	ND [1]	ND [1]	ND [1]
Chemical Oxygen Demand	--	--	mg/L	25.8 J	35.7 J	27.8 J	20 UJ	21.8 J	61.6 J	20 UJ	31.7 J	33.7 J
Hydroxide Alkalinity	--	--	mg/L	ND [1]	ND [1]	ND [1]	ND [1]	ND [1]	ND [2]	ND [1]	ND [1]	ND [1]
Nitrate/Nitrite Nitrogen	--	--	mg/L	0.027 UJ	0.02 UJ	0.012 UJ	0.025 J	0.02 UJ	0.032 UJ	0.012 UJ	0.015 UJ	0.023 UJ
Sulfate	--	--	mg/L	36.9 J	0.48 J	147 J	0.2 UJ	84.4 J	1.5 J	92.9 J	102 J	65.3 J
Total Alkalinity	--	--	mg/L	384	679	479	3.4	511	842	382	516	475
Total Organic Carbon	--	--	mg/L	2.6	7.1	3.4	ND [1]	5.7	16.8	2.2	7.6	6.8
Total Suspended Solids	--	--	mg/L	15.6	44.3	27.2	ND [0.5]	12	53.6	11	19.5	15.1

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POST-CLOSURE GROUNDWATER SAMPLING ANALYTICAL RESULTS SUMMARY

ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER SUPERFUND SITE
KING HIGHWAY LANDFILL OPERABLE UNIT

Sample ID: / Well ID: / Date Collected:	Generic GSI Values	Site Specific WQBEL	Units	H85313 MW-8BR 02/09/06	H85314 MW-13AR 02/09/06	H85315 MW-13B 02/09/06	H85316 MW-8AR 02/10/06	H85317 DUP [MW-8AR] 02/10/06	H85318 MW-3AR 02/10/06	H85319 MW-15AR 02/10/06	H85320 DUP [MW-15AR] 02/10/06	H85321 MW-14AR 02/10/06
VOCs												
Acetone	1,700	--	µg/L	ND [5]	ND [5]	ND [5]	ND [5]	1.7 J	4.7 J	ND [5]	ND [5]	1.7 J
SVOCs												
4-Methylphenol[6]	71	--	µg/L	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	2 J	ND [10]	ND [10]	ND [10]
Naphthalene	13	--	µg/L	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]
Phenol	210	--	µg/L	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]
PCBs												
Aroclor 1016	--	--	µg/L	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.051]	ND [0.05]	ND [0.051]	ND [0.05]
Aroclor 1221	--	--	µg/L	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.051]	ND [0.05]	ND [0.051]	ND [0.05]
Aroclor 1232	--	--	µg/L	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.051]	ND [0.05]	ND [0.051]	ND [0.05]
Aroclor 1242	--	--	µg/L	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.051]	ND [0.05]	ND [0.051]	ND [0.05]
Aroclor 1248	--	--	µg/L	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.051]	ND [0.05]	ND [0.051]	ND [0.05]
Aroclor 1254	--	--	µg/L	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.051]	ND [0.05]	ND [0.051]	ND [0.05]
Aroclor 1260	--	--	µg/L	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.05]	ND [0.051]	ND [0.05]	ND [0.051]	ND [0.05]
Total PCBs	0.2	--	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals												
Barium	--	2,300	µg/L	280	627	234	460	441	418	270	263	264
Calcium	--	--	µg/L	155,000	250,000	150,000	199,000	191,000	189,000	153,000	149,000	148,000
Chromium[7]	11	--	µg/L	ND [1.5]	ND [1.5]	ND [1.5]	ND [1.5]	ND [1.5]	ND [1.5]	ND [1.5]	ND [1.5]	ND [1.5]
Iron	--	--	µg/L	10,700	97,200	8,360	71,800	68,600	81,500	10,600	10,200	11,000
Sodium	--	--	µg/L	102,000	29,600	98,400	59,800	58,900	2760 B	120,000	119,000	102,000
Thallium	3.7	160	µg/L	ND [8.2]	ND [8.2]	ND [8.2]	ND [8.2]	ND [8.2]	ND [8.2]	ND [8.2]	ND [8.2]	ND [8.2]
Zinc	--	1,200	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	1.2	--	µg/L	ND [2.5]	ND [2.5]	ND [2.5]	ND [2.5]	ND [2.5]	ND [2.5]	ND [2.5]	ND [2.5]	ND [2.5]
Miscellaneous												
Bicarbonate Alkalinity	--	--	mg/L	425	860	433	545	553	547	436	434	414
Carbonate Alkalinity	--	--	mg/L	ND [1]	ND [2]	ND [1]	ND [1]	ND [1]	ND [1]	ND [1]	ND [1]	ND [1]
Chemical Oxygen Demand	--	--	mg/L	21.8 J	45.7 J	20 UJ	39.7 J	35.7 J	29.8 J	20 UJ	20 UJ	49.7 J
Hydroxide Alkalinity	--	--	mg/L	ND [1]	ND [2]	ND [1]	ND [1]	ND [1]	ND [1]	ND [1]	ND [1]	ND [1]
Nitrate/Nitrite Nitrogen	--	--	mg/L	0.042 UJ	0.01 UJ	0.019 UJ	0.026 UJ	0.027 UJ	0.033 UJ	0.01 UJ	0.01 UJ	0.01 UJ
Sulfate	--	--	mg/L	67 J	11.2 J	78.8 J	25.8 J	39.4 J	3.2 J	63.6 J	63.5 J	87 J
Total Alkalinity	--	--	mg/L	425	860	433	545	553	547	436	434	414
Total Organic Carbon	--	--	mg/L	3	9.4	2.1	8.6	8.6	5.7	4.5	4.2	4
Total Suspended Solids	--	--	mg/L	17.7	52.2	16.4	29.5	36.3	76.2	20.1	20.6	14.6

Notes:

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2. ND - Not detected. Practical quantitation limits are shown in brackets.
3. NA - Not analyzed.
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5. mg/L - Milligrams per liter.
6. GSI Value is for methylphenols.
7. Total Chromium is being analyzed, but the GSI Value refers to Chromium (VI) oxidation state.
8. The Generic GSI Values are obtained from the KHL-OU Hydrogeologic Monitoring Plan (September 2002).
9. The WQBEL values are per the MDEQ Surface Water Quality Division, as recommended in a January 22, 1998 interoffice communication.

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POST-CLOSURE GROUNDWATER SAMPLING ANALYTICAL RESULTS SUMMARY

ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER SUPERFUND SITE
KING HIGHWAY LANDFILL OPERABLE UNIT

Sample ID: / Well ID: / Date Collected:	Generic GSI Values	Site Specific WQBEL	Units	H85322 MW-7 05/08/06	H85323 MW-2R 05/08/06	H85325 MW-1AR 05/09/06	H85326 MW-16A 05/09/06	H85327 Equip. Blank [MW-11RR] 05/09/06	H85328 MW-12AR 05/09/06	H85330 MW-12B 05/09/06
VOCs										
Acetone	1,700	--	µg/L	NA	NA	NA	NA	NA	NA	NA
SVOCs										
4-Methylphenol[6]	71	--	µg/L	ND [9.6]	ND [9.6]	ND [9.6]	ND [9.5]	ND [9.5]	ND [9.8]	ND [9.6]
Naphthalene	13	--	µg/L	ND [9.6]	ND [9.6]	ND [9.6]	ND [9.5]	ND [9.5]	ND [9.8]	ND [9.6]
Phenol	210	--	µg/L	NA	NA	NA	NA	NA	NA	NA
PCBs										
Aroclor 1016	--	--	µg/L	ND [0.048]	ND [0.05]	ND [0.049]	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.048]
Aroclor 1221	--	--	µg/L	ND [0.048]	ND [0.05]	ND [0.049]	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.048]
Aroclor 1232	--	--	µg/L	ND [0.048]	ND [0.05]	ND [0.049]	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.048]
Aroclor 1242	--	--	µg/L	ND [0.048]	ND [0.05]	ND [0.049]	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.048]
Aroclor 1248	--	--	µg/L	ND [0.048]	ND [0.05]	ND [0.049]	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.048]
Aroclor 1254	--	--	µg/L	ND [0.048]	ND [0.05]	ND [0.049]	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.048]
Aroclor 1260	--	--	µg/L	ND [0.048]	ND [0.05]	ND [0.049]	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.048]
Total PCBs	0.2	--	µg/L	ND	ND	ND	ND	ND	ND	ND
Metals										
Barium	--	2,300	µg/L	64 B	146 B	417	400	ND [9.4]	644	247
Calcium	--	--	µg/L	152,000	140,000	227,000	164,000	ND [348]	220,000	123,000
Chromium[7]	11	--	µg/L	NA	NA	NA	NA	NA	NA	NA
Iron	--	--	µg/L	2,510	9,550	91,400	9,390	ND [39.9]	34,400	4,960
Sodium	--	--	µg/L	74,600 J	88,000 J	3,280 J	66,400 J	ND [564] J	54,400 J	86,500 J
Thallium	3.7	160	µg/L	ND [3.5]	ND [3.5]	ND [3.5]	ND [3.5]	ND [3.5]	ND [3.5]	ND [3.5]
Zinc	--	1,200	µg/L	NA	NA	NA	NA	NA	NA	NA
Vanadium	12	--	µg/L	NA	NA	NA	NA	NA	NA	NA
Miscellaneous										
Bicarbonate Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA
Carbonate Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA
Chemical Oxygen Demand	--	--	mg/L	31.7	ND [20]	37.8	23.6	ND [20]	48	ND[20]
Hydroxide Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite Nitrogen	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA
Sulfate	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA
Total Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	--	--	mg/L	3.8	3.5	6	8.3	ND [1]	14.3	2.5
Total Suspended Solids	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA

Notes:

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POST-CLOSURE GROUNDWATER SAMPLING ANALYTICAL RESULTS SUMMARY

ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER SUPERFUND SITE
KING HIGHWAY LANDFILL OPERABLE UNIT

Sample ID: / Well ID: / Date Collected:	Generic GSI Values	Site Specific WQBEL	Units	H85331 MW-13AR 05/10/06	H85332 MW-13B 05/10/06	H85333 MW-8BR 05/10/06	H85334 DUP [MW-8AR] 05/10/06	H85335 MW-8AR 05/10/06	H85336 MW-14AR 05/11/06	H85337 MW-16B 05/11/06
VOCs										
Acetone	1,700	--	µg/L	NA	NA	NA	NA	NA	NA	NA
SVOCs										
4-Methylphenol[8]	71	--	µg/L	ND [9.5]	ND [9.6]	ND [9.4]	ND [9.4]	ND [9.4]	ND [9.6]	ND [9.4]
Naphthalene	13	--	µg/L	ND [9.5]	ND [9.6]	ND [9.4]	ND [9.4]	ND [9.4]	ND [9.6]	ND [9.4]
Phenol	210	--	µg/L	NA	NA	NA	NA	NA	NA	NA
PCBs										
Aroclor 1016	--	--	µg/L	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.049]	ND [0.049]
Aroclor 1221	--	--	µg/L	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.049]	ND [0.049]
Aroclor 1232	--	--	µg/L	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.049]	ND [0.049]
Aroclor 1242	--	--	µg/L	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.049]	ND [0.049]
Aroclor 1248	--	--	µg/L	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.049]	ND [0.049]
Aroclor 1254	--	--	µg/L	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.049]	ND [0.049]
Aroclor 1260	--	--	µg/L	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.049]	ND [0.049]
Total PCBs	0.2	--	µg/L	ND	ND	ND	ND	ND	ND	ND
Metals										
Barium	--	2,300	µg/L	469	176 B	252	391	364	236	501
Calcium	--	--	µg/L	216,000	121,000	148,000	171,000	160,000	136,000	154,000
Chromium[7]	11	--	µg/L	NA	NA	NA	NA	NA	NA	NA
Iron	--	--	µg/L	70,000	7,010	11,700	37,100	37,100	9,670	7,840
Sodium	--	--	µg/L	52,800 J	90,800 J	94,000 J	75,000 J	69,600 J	100,000 J	71,200 J
Thallium	3.7	160	µg/L	ND [3.5]	ND [3.5]	ND [3.5]	ND [3.5]	ND [3.5]	ND [3.5]	ND [3.5]
Zinc	--	1,200	µg/L	NA	NA	NA	NA	NA	NA	NA
Vanadium	12	--	µg/L	NA	NA	NA	NA	NA	NA	NA
Miscellaneous										
Bicarbonate Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA
Carbonate Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA
Chemical Oxygen Dema	--	--	mg/L	35.8	ND [20]	25.6	29.7	31.7	ND [20]	21.5
Hydroxide Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite Nitrogen	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA
Sulfate	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA
Total Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	--	--	mg/L	11.8	3.5	4.9	10.3	10	5.3	8.1
Total Suspended Solids	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA

Notes:

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POST-CLOSURE GROUNDWATER SAMPLING ANALYTICAL RESULTS SUMMARY

ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER SUPERFUND SITE
KING HIGHWAY LANDFILL OPERABLE UNIT

Sample ID: / Well ID: / Date Collected:	Generic GSI Values	Site Specific WQBEL	Units	H85338 MW-3AR 05/11/06	H85339 DUP [MW-15AR] 05/11/06	H85340 MW-15AR 05/11/06	H85341 MW-11RR 05/11/06	H85342 MW-7 08/21/06	H85343 MW-2R 08/21/06	H85344 MW-1AR 08/22/06	H85345 MW-11RR 08/22/06	H85346 Equip. Blank [MW-11RR] 08/22/06
VOCs												
Acetone	1,700	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
SVOCs												
4-Methylphenol[6]	71	--	µg/L	1.5 J	ND [9.5]	ND [9.5]	ND [9.4]	ND [10]	ND [9.7]	ND [9.5]	ND [9.6]	ND [9.8]
Naphthalene	13	--	µg/L	ND [9.6]	ND [9.5]	ND [9.5]	ND [9.4]	ND [10]	ND [9.7]	ND [9.5]	ND [9.6]	ND [9.8]
Phenol	210	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCBs												
Aroclor 1016	--	--	µg/L	ND [0.048]	ND [0.047]	ND [0.047]	ND [0.05]	ND [0.049]	ND [0.049]	ND [0.048]	ND [0.048]	ND [0.049]
Aroclor 1221	--	--	µg/L	ND [0.048]	ND [0.047]	ND [0.047]	ND [0.05]	ND [0.049]	ND [0.049]	ND [0.048]	ND [0.048]	ND [0.049]
Aroclor 1232	--	--	µg/L	ND [0.048]	ND [0.047]	ND [0.047]	ND [0.05]	ND [0.049]	ND [0.049]	ND [0.048]	ND [0.048]	ND [0.049]
Aroclor 1242	--	--	µg/L	ND [0.048]	ND [0.047]	ND [0.047]	ND [0.05]	ND [0.049]	ND [0.049]	ND [0.048]	ND [0.048]	ND [0.049]
Aroclor 1248	--	--	µg/L	ND [0.048]	ND [0.047]	ND [0.047]	ND [0.05]	ND [0.049]	ND [0.049]	ND [0.048]	ND [0.048]	ND [0.049]
Aroclor 1254	--	--	µg/L	ND [0.048]	ND [0.047]	ND [0.047]	ND [0.05]	ND [0.049]	ND [0.049]	ND [0.048]	ND [0.048]	ND [0.049]
Aroclor 1260	--	--	µg/L	ND [0.048]	ND [0.047]	ND [0.047]	ND [0.05]	ND [0.049]	ND [0.049]	ND [0.048]	ND [0.048]	ND [0.049]
Total PCBs	0.2	--	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals												
Barium	--	2,300	µg/L	175 B	249	245	394	63.2 B	157 B	346	387	ND [5.4]
Calcium	--	--	µg/L	155,000	148,000	145,000	152,000	142,000	147,000	180,000	141,000	ND [184]
Chromium[7]	11	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	--	--	µg/L	37,200	10,100	9,860	5,010	704 J	9,040 J	73,000 J	4,710 J	60.5 J
Sodium	--	--	µg/L	100,000 J	132,000 J	130,000 J	76,600 J	73,200	82,800	4,930 B	74,000	ND [5,000]
Thallium	3.7	160	µg/L	ND [3.5]	ND [3.5]	ND [3.5]	ND [3.5]	ND [5.3]	ND [5.3]	ND [5.3]	ND [5.3]	ND [5.3]
Zinc	--	1,200	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	12	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Miscellaneous												
Bicarbonate Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbonate Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chemical Oxygen Demand	--	--	mg/L	23.6	ND [20]	ND [20]	ND [20]	ND [20]	ND [20]	29.7	ND [20]	ND [20]
Hydroxide Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite Nitrogen	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	--	--	mg/L	4.3	4.6	4.6	5	3.6 J	3.6 J	6.2 J	6 J	1 J
Total Suspended Solids	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA

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9. The WQBEL values are per the MDEQ Surface Water Quality Division, as recommended in a January 22, 1998 interoffice communication.

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UJ - The compound/analyte was not detected above the reported sample quantitation/detection limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation/detection.

POST-CLOSURE GROUNDWATER SAMPLING ANALYTICAL RESULTS SUMMARY

ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER SUPERFUND SITE
KING HIGHWAY LANDFILL OPERABLE UNIT

Sample ID: / Well ID: / Date Collected:	Generic GSI Values	Site Specific WQBEL	Units	H85347 MW-16B 08/22/06	H85348 MW-16A 08/22/06	H85349 MW-12B 08/23/06	H85350 MW-13B 08/23/06	H85351 MW-12AR 08/23/06	H85352 MW-13AR 08/23/06	H85353 MW-8BR 08/24/06	H85354 MW-8AR 08/24/06	H85355 DUP [MW-8AR] 08/24/06
VOCs												
Acetone	1,700	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
SVOCs												
4-Methylphenol[6]	71	--	µg/L	ND [9.5]	ND [9.7]	ND [10]	ND [9.7]	ND [9.4]	ND [9.5]	ND [10]	ND [9.7]	ND [9.8]
Naphthalene	13	--	µg/L	ND [9.5]	ND [9.7]	ND [10]	ND [9.7]	ND [9.4]	ND [9.5]	ND [10]	ND [9.7]	ND [9.8]
Phenol	210	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCBs												
Aroclor 1016	--	--	µg/L	ND [0.048]	ND [0.049]	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.049]	ND [0.048]	ND [0.048]
Aroclor 1221	--	--	µg/L	ND [0.048]	ND [0.049]	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.049]	ND [0.048]	ND [0.048]
Aroclor 1232	--	--	µg/L	ND [0.048]	ND [0.049]	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.049]	ND [0.048]	ND [0.048]
Aroclor 1242	--	--	µg/L	ND [0.048]	ND [0.049]	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.049]	ND [0.048]	ND [0.048]
Aroclor 1248	--	--	µg/L	ND [0.048]	ND [0.049]	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.049]	ND [0.048]	ND [0.048]
Aroclor 1254	--	--	µg/L	ND [0.048]	ND [0.049]	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.049]	ND [0.048]	ND [0.048]
Aroclor 1260	--	--	µg/L	ND [0.048]	ND [0.049]	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.049]	ND [0.048]	ND [0.048]
Total PCBs	0.2	--	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals												
Barium	--	2,300	µg/L	445	390	268	198 B	612	438	264	471	457
Calcium	--	--	µg/L	141,000	158,000	132,000	132,000	203,000	195,000	150,000	186,000	180,000
Chromium[7]	11	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	--	--	µg/L	6,610 J	8,970 J	5,100 J	7,690 J	35,200 J	54,200 J	10,900 J	33,800 J	33,700 J
Sodium	--	--	µg/L	73,800	68,200	90,500	96,200	70,800	58,800	88,600	71,600	69,000
Thallium	3.7	160	µg/L	ND [5.3]	ND [5.3]	ND [7.8]	ND [7.8]	ND [7.8]	ND [7.8]	ND [7.8]	ND [7.8]	ND [7.8]
Zinc	--	1,200	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	12	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Miscellaneous												
Bicarbonate Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbonate Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chemical Oxygen Demand	--	--	mg/L	ND [20]	52	ND [20]	ND [20]	52	33.7	21.5	37.8	39.8
Hydroxide Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite Nitrogen	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	--	--	mg/L	6.7 J	6.6 J	3.8 J	3.6 J	16.8 J	9.3 J	4.8 J	10.9 J	11.1 J
Total Suspended Solids	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

1. Exceedances of the Groundwater Surface Water Interface (GSI) and/or Waster Quality-Based Effluent Limits (WQBEL) values, where applicable, are indicated by shading.
2. ND - Not detected. Practical quantitation limits are shown in brackets.
3. NA - Not analyzed.
4. µg/L - Micrograms per liter.
5. mg/L - Milligrams per liter.
6. GSI Value is for methylphenols.
7. Total Chromium is being analyzed, but the GSI Value refers to Chromium (VI) oxidation state.
8. The Generic GSI Values are obtained from the KHL-OU Hydrogeologic Monitoring Plan (September 2002).
9. The WQBEL values are per the MDEQ Surface Water Quality Division, as recommended in a January 22, 1998 interoffice communication.

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POST-CLOSURE GROUNDWATER SAMPLING ANALYTICAL RESULTS SUMMARY

ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER SUPERFUND SITE
KING HIGHWAY LANDFILL OPERABLE UNIT

Sample ID: / Well ID: / Date Collected:	Generic GSI Values	Site Specific WQBEL	Units	H85356 MW-14AR 08/24/06	H85357 MW-15AR 08/25/06	H85358 DUP [MW-15AR] 08/25/06	H85359 MW-3AR 08/25/06	H85360 MW-2R 11/06/06	H85361 MW07 11/06/06	H85362 MW-1AR 11/07/06	H85363 MW-11RR 11/07/06	H85364 Equip. Blank [MW-11RR] 11/07/06
VOCs												
Acetone	1,700	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
SVOCs												
4-Methylphenol[6]	71	--	µg/L	ND [9.8]	ND [9.8]	ND [9.8]	ND [10]	ND [9.6]	ND [9.6]	ND [9.8]	ND [10]	ND [9.8]
Naphthalene	13	--	µg/L	ND [9.8]	ND [9.8]	ND [9.8]	ND [10]	ND [9.6]	ND [9.6]	ND [9.8]	ND [10]	ND [9.8]
Phenol	210	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCBs												
Aroclor 1016	--	--	µg/L	ND [0.049]	ND [0.048]	ND [0.048]	ND [0.05]	ND [0.048]	ND [0.05]	ND [0.048]	ND [0.053]	ND [0.048]
Aroclor 1221	--	--	µg/L	ND [0.049]	ND [0.048]	ND [0.048]	ND [0.05]	ND [0.048]	ND [0.05]	ND [0.048]	ND [0.053]	ND [0.048]
Aroclor 1232	--	--	µg/L	ND [0.049]	ND [0.048]	ND [0.048]	ND [0.05]	ND [0.048]	ND [0.05]	ND [0.048]	ND [0.053]	ND [0.048]
Aroclor 1242	--	--	µg/L	ND [0.049]	ND [0.048]	ND [0.048]	ND [0.05]	ND [0.048]	ND [0.05]	ND [0.048]	ND [0.053]	ND [0.048]
Aroclor 1248	--	--	µg/L	ND [0.049]	ND [0.048]	ND [0.048]	ND [0.05]	ND [0.048]	ND [0.05]	ND [0.048]	ND [0.053]	ND [0.048]
Aroclor 1254	--	--	µg/L	ND [0.049]	ND [0.048]	ND [0.048]	ND [0.05]	ND [0.048]	ND [0.05]	ND [0.048]	ND [0.053]	ND [0.048]
Aroclor 1260	--	--	µg/L	ND [0.049]	ND [0.048]	ND [0.048]	ND [0.05]	ND [0.048]	ND [0.05]	ND [0.048]	ND [0.053]	ND [0.048]
Total PCBs	0.2	--	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals												
Barium	--	2,300	µg/L	239	228	233	176 B	183 B	69.9 B	344	421	ND [4.2]
Calcium	--	--	µg/L	142,000	137,000	140,000	140,000	147,000	158,000	203,000	154,000	127 B
Chromium[7]	11	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	--	--	µg/L	10,300 J	9,430 J	9,390 J	15,200 J	8,360	3,770	74,200	5,230	ND [46.8]
Sodium	--	--	µg/L	79,700	106,000	102,000	116,000	44,600	82,900	3,700 B	82,100	614 B
Thallium	3.7	160	µg/L	ND [7.8]	ND [7.8]	ND [7.8]	ND [7.8]	ND [6.1]	ND [6.1]	ND [6.1]	ND [6.1]	ND [6.1]
Zinc	--	1,200	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	12	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Miscellaneous												
Bicarbonate Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbonate Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chemical Oxygen Demand	--	--	mg/L	35.8	ND [20]	23.6	ND [20]	ND [20]	20.2	32.6	ND [20]	ND [20]
Hydroxide Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite Nitrogen	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	--	--	mg/L	4.8 J	3.8 J	3.9 J	3.8 J	4.1	5.7	6.6	7.4	ND [1]
Total Suspended Solids	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

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POST-CLOSURE GROUNDWATER SAMPLING ANALYTICAL RESULTS SUMMARY

ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER SUPERFUND SITE
KING HIGHWAY LANDFILL OPERABLE UNIT

Sample ID: / Well ID: / Date Collected:	Generic GSI Values	Site Specific WQBEL	Units	H85365 MW-16A 11/07/06	H85366 MW-16B 11/08/06	H85367 MW-12B 11/08/06	H85368 MW-13B 11/08/06	H85369 MW-13AR 11/08/06	H85370 MW-12AR 11/08/06	H85371 MW-8AR 11/09/06	H85372 DUP [MW-8AR] 11/09/06	H85373 MW-8BR 11/09/06
VOCs												
Acetone	1,700	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
SVOCs												
4-Methylphenol[8]	71	--	µg/L	ND [9.6]	ND [9.4]	ND [9.5]	ND [10]	ND [9.4]	ND [9.5]	ND [10]	ND [10]	ND [9.8]
Naphthalene	13	--	µg/L	ND [9.6]	ND [9.4]	ND [9.5]	ND [10]	ND [9.4]	ND [9.5]	ND [10]	ND [10]	ND [9.8]
Phenol	210	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCBs												
Aroclor 1016	--	--	µg/L	ND [0.047]	ND [0.048]	ND [0.047]	ND [0.051]	ND [0.052]	ND [0.049]	ND [0.051]	ND [0.051]	ND [0.051]
Aroclor 1221	--	--	µg/L	ND [0.047]	ND [0.048]	ND [0.047]	ND [0.051]	ND [0.052]	ND [0.049]	ND [0.051]	ND [0.051]	ND [0.051]
Aroclor 1232	--	--	µg/L	ND [0.047]	ND [0.048]	ND [0.047]	ND [0.051]	ND [0.052]	ND [0.049]	ND [0.051]	ND [0.051]	ND [0.051]
Aroclor 1242	--	--	µg/L	ND [0.047]	ND [0.048]	ND [0.047]	ND [0.051]	ND [0.052]	ND [0.049]	ND [0.051]	ND [0.051]	ND [0.051]
Aroclor 1248	--	--	µg/L	ND [0.047]	ND [0.048]	ND [0.047]	ND [0.051]	ND [0.052]	ND [0.049]	ND [0.051]	ND [0.051]	ND [0.051]
Aroclor 1254	--	--	µg/L	ND [0.047]	ND [0.048]	ND [0.047]	ND [0.051]	ND [0.052]	ND [0.049]	ND [0.051]	ND [0.051]	ND [0.051]
Aroclor 1260	--	--	µg/L	ND [0.047]	ND [0.048]	ND [0.047]	ND [0.051]	ND [0.052]	ND [0.049]	ND [0.051]	ND [0.051]	ND [0.051]
Total PCBs	0.2	--	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals												
Barium	--	2,300	µg/L	394	469	255	197 B	505	569	461	446	228
Calcium	--	--	µg/L	164,000	156,000	135,000	140,000	246,000	203,000	195,000	189,000	137,000
Chromium[7]	11	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	--	--	µg/L	10,000	7,580	4,940	7,680	66,400	33,200	37,900	36,800	9,400
Sodium	--	--	µg/L	69,100	78,100	86,300	90,000	28,000	69,300	37,200	41,600	105,000
Thallium	3.7	160	µg/L	ND [6.1]	ND [6.1]	ND [6.1]	ND [6.1]	ND [6.1]	ND [6.1]	ND [6.1]	ND [6.1]	ND [6.1]
Zinc	--	1,200	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	12	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Miscellaneous												
Bicarbonate Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbonate Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chemical Oxygen Demand	--	--	mg/L	20.2	22.3	ND [20]	ND [20]	30.5	46.9	ND [20]	24.3	ND [20]
Hydroxide Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite Nitrogen	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	--	--	mg/L	7.3 J	6.5	2.1	4.8	13.2	20.5	10.6	10.7	7.5
Total Suspended Solids	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

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POST-CLOSURE GROUNDWATER SAMPLING ANALYTICAL RESULTS SUMMARY

ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER SUPERFUND SITE
KING HIGHWAY LANDFILL OPERABLE UNIT

Sample ID: / Well ID: / Date Collected:	Generic GSI Values	Site Specific WQBEL	Units	H85374 MW-14AR 11/09/06	H85375 MW-3AR 11/10/06	H85376 MW-15AR 11/10/06	H85377 DUP [MW-15AR] 11/10/06	H85378 MW-7 02/05/07	H85379 MW-1AR 02/06/07	H85380 MW-2R 02/06/07
VOCs										
Acetone	1,700	--	µg/L	NA	NA	NA	NA	ND [5.0]	ND [5.0]	ND [5.0]
SVOCs										
4-Methylphenol[6]	71	--	µg/L	ND [9.5]	ND [10]	ND [9.6]	ND [10]	ND [9.7]	ND [9.7]	ND [9.4]
Naphthalene	13	--	µg/L	ND [9.5]	ND [10]	ND [9.6]	ND [10]	ND [9.7]	ND [9.7]	ND [9.4]
Phenol	210	--	µg/L	NA	NA	NA	NA	ND [9.7]	ND [9.7]	ND [9.4]
PCBs										
Aroclor 1016	--	--	µg/L	ND [0.051]	ND [0.05]	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.047]
Aroclor 1221	--	--	µg/L	ND [0.051]	ND [0.05]	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.047]
Aroclor 1232	--	--	µg/L	ND [0.051]	ND [0.05]	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.047]
Aroclor 1242	--	--	µg/L	ND [0.051]	ND [0.05]	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.047]
Aroclor 1248	--	--	µg/L	ND [0.051]	ND [0.05]	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.047]
Aroclor 1254	--	--	µg/L	ND [0.051]	ND [0.05]	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.047]
Aroclor 1260	--	--	µg/L	ND [0.051]	ND [0.05]	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.047]
Total PCBs	0.2	--	µg/L	ND	ND	ND	ND	ND	ND	ND
Metals										
Barium	--	2,300	µg/L	227	333	228	238	78.2 B	413	214
Calcium	--	--	µg/L	147,000	185,000	144,000	150,000	172,000	221,000	157,000
Chromium[7]	11	--	µg/L	NA	NA	NA	NA	ND [10]	ND [10]	ND [10]
Iron	--	--	µg/L	10,100	45,600	9,390	9,740	4,370	83,500	9,650
Sodium	--	--	µg/L	101,000	95,100	123,000	121,000	61,700	4,090 B	98,500
Thallium	3.7	160	µg/L	ND [6.1]	ND [6.1]	ND [6.1]	ND [6.1]	ND [6.9]	15.5 B	ND [6.9]
Zinc	--	1,200	µg/L	NA	NA	NA	NA	NA	NA	NA
Vanadium	12	--	µg/L	NA	NA	NA	NA	ND [2.7]	ND [2.7]	ND [2.7]
Miscellaneous										
Bicarbonate Alkalinity	--	--	mg/L	NA	NA	NA	NA	430	740	460
Carbonate Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA
Chemical Oxygen Demand	--	--	mg/L	ND [20]	ND [20]	ND [20]	ND [20]	ND [20]	24.3	ND [20]
Hydroxide Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite Nitrogen	--	--	mg/L	NA	NA	NA	NA	0.032 B	ND [0.1]	0.085 B
Sulfate	--	--	mg/L	NA	NA	NA	NA	140	2.4	34
Total Alkalinity	--	--	mg/L	NA	NA	NA	NA	430	740	460
Total Organic Carbon	--	--	mg/L	6.4	5.1	5.1	5.5 J	3.8	6.4	4.1
Total Suspended Solids	--	--	mg/L	NA	NA	NA	NA	39.2	51.3	12.8

Notes:

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POST-CLOSURE GROUNDWATER SAMPLING ANALYTICAL RESULTS SUMMARY

ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER SUPERFUND SITE
KING HIGHWAY LANDFILL OPERABLE UNIT

Sample ID: / Well ID: / Date Collected:	Generic GSI Values	Site Specific WQBEL	Units	H85381 MW-16A 02/06/07	H85382 MW-11RR 02/06/07	H85383 Equip. Blank [MW-11RR] 02/06/07	H85384 MW-12B 02/07/07	H85385 MW-16B 02/07/07	H85386 MW-12AR 02/07/07	H85387 MW-13B 02/07/07
VOCs										
Acetone	1,700	--	µg/L	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]
SVOCs										
4-Methylphenol[6]	71	--	µg/L	ND [9.6]	ND [9.7]	ND [9.9]	ND [10]	ND [9.6]	ND [9.5]	ND [9.7]
Naphthalene	13	--	µg/L	ND [9.6]	ND [9.7]	ND [9.9]	ND [10]	ND [9.6]	ND [9.5]	ND [9.7]
Phenol	210	--	µg/L	ND [9.6]	ND [9.7]	ND [9.9]	ND [10]	ND [9.6]	ND [9.5]	ND [9.7]
PCBs										
Aroclor 1016	--	--	µg/L	ND [0.047]	ND [0.048]	ND [0.048]	ND [0.053]	ND [0.047]	ND [0.048]	ND [0.048]
Aroclor 1221	--	--	µg/L	ND [0.047]	ND [0.048]	ND [0.048]	ND [0.053]	ND [0.047]	ND [0.048]	ND [0.048]
Aroclor 1232	--	--	µg/L	ND [0.047]	ND [0.048]	ND [0.048]	ND [0.053]	ND [0.047]	ND [0.048]	ND [0.048]
Aroclor 1242	--	--	µg/L	ND [0.047]	ND [0.048]	ND [0.048]	ND [0.053]	ND [0.047]	ND [0.048]	ND [0.048]
Aroclor 1248	--	--	µg/L	ND [0.047]	ND [0.048]	ND [0.048]	ND [0.053]	ND [0.047]	ND [0.048]	ND [0.048]
Aroclor 1254	--	--	µg/L	ND [0.047]	ND [0.048]	ND [0.048]	ND [0.053]	ND [0.047]	ND [0.048]	ND [0.048]
Aroclor 1260	--	--	µg/L	ND [0.047]	ND [0.048]	ND [0.048]	ND [0.053]	ND [0.047]	ND [0.048]	ND [0.048]
Total PCBs	0.2	--	µg/L	ND	ND	ND	ND	ND	ND	ND
Metals										
Barium	--	2,300	µg/L	442	424	9.8 U	283	519	668	225
Calcium	--	--	µg/L	168,000	151,000	476 B	134,000	152,000	210,000	144,000
Chromium[7]	11	--	µg/L	ND [10]	ND [10]	1.3 B	ND [10]	ND [10]	ND [10]	ND [10]
Iron	--	--	µg/L	10,200	4,550	49.7 B	4,890	7,590	39,600	8,330
Sodium	--	--	µg/L	72,400	79,800	777 B	91,000	80,600	51,300	95,400
Thallium	3.7	160	µg/L	ND [6.9]	ND [6.9]	ND [6.9]	ND [6.9]	ND [6.9]	ND [6.9]	ND [6.9]
Zinc	--	1,200	µg/L	NA	NA	NA	NA	NA	NA	NA
Vanadium	12	--	µg/L	ND [2.7]	ND [2.7]	ND [2.7]	ND [2.7]	ND [2.7]	ND [2.7]	ND [2.7]
Miscellaneous										
Bicarbonate Alkalinity	--	--	mg/L	510	450	1.8 B	370	480	810	390
Carbonate Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA
Chemical Oxygen Demand	--	--	mg/L	ND [20]	ND [20]	ND [20]	ND [20]	ND [20]	36.7	ND [20]
Hydroxide Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite Nitrogen	--	--	mg/L	ND [0.1]	ND [0.1]	ND [0.1]	0.037 B	ND [0.1]	ND [0.1]	ND [0.1]
Sulfate	--	--	mg/L	51	62	ND [0.2]	76	42	3.2	69
Total Alkalinity	--	--	mg/L	510	450	1.8 B	370	480	810	390
Total Organic Carbon	--	--	mg/L	7.7	5	ND [1]	1.9	7.6	14.8	3.2
Total Suspended Solids	--	--	mg/L	17.4	12.6	ND [0.5]	10.6	16.9	23.2	9.2

Notes:

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9. The WQBEL values are per the MDEQ Surface Water Quality Division, as recommended in a January 22, 1998 interoffice communication.

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POST-CLOSURE GROUNDWATER SAMPLING ANALYTICAL RESULTS SUMMARY

ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER SUPERFUND SITE
KING HIGHWAY LANDFILL OPERABLE UNIT

Sample ID: / Well ID: / Date Collected:	Generic GSI Values	Site Specific WQBEL	Units	H85388 MW-8AR 02/08/07	H85389 DUP [MW-15AR] 02/08/07	H85390 MW-13AR 02/08/07	H85391 MW-8BR 02/08/07	H85392 MW-14AR 02/09/07	H85393 MW-15AR 02/09/07	H85394 DUP [MW-15AR] 02/09/07
VOCs										
Acetone	1,700	--	µg/L	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]	ND [5.0]
SVOCs										
4-Methylphenol[6]	71	--	µg/L	ND [9.4]	ND [9.4]	ND [9.4]	ND [9.4]	ND [9.5]	ND [9.6]	ND [9.8]
Naphthalene	13	--	µg/L	ND [9.4]	ND [9.4]	ND [9.4]	ND [9.4]	ND [9.5]	ND [9.6]	ND [9.8]
Phenol	210	--	µg/L	ND [9.4]	ND [9.4]	ND [9.4]	ND [9.4]	ND [9.5]	ND [9.6]	ND [9.8]
PCBs										
Aroclor 1016	--	--	µg/L	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.047]	ND [0.048]	ND [0.048]
Aroclor 1221	--	--	µg/L	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.047]	ND [0.048]	ND [0.048]
Aroclor 1232	--	--	µg/L	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.047]	ND [0.048]	ND [0.048]
Aroclor 1242	--	--	µg/L	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.047]	ND [0.048]	ND [0.048]
Aroclor 1248	--	--	µg/L	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.047]	ND [0.048]	ND [0.048]
Aroclor 1254	--	--	µg/L	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.047]	ND [0.048]	ND [0.048]
Aroclor 1260	--	--	µg/L	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.047]	ND [0.048]	ND [0.048]
Total PCBs	0.2	--	µg/L	ND	ND	ND	ND	ND	ND	ND
Metals										
Barium	--	2,300	µg/L	499	501	655	266	246	270	268
Calcium	--	--	µg/L	196,000	197,000	266,000	152,000	143,000	153,000	152,000
Chromium[7]	11	--	µg/L	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]	ND [10]
Iron	--	--	µg/L	35,500	35,800	66,100	9,620	8,780	9,800	9,720
Sodium	--	--	µg/L	43,500	43,400	13,900	103,200 E,J	116,100 E,J	141,500 E,J	140,200 E,J
Thallium	3.7	160	µg/L	ND [6.9]	8.5 B	ND [6.9]	ND [6.9]	ND [6.9]	ND [6.9]	ND [6.9]
Zinc	--	1,200	µg/L	NA	NA	NA	NA	NA	NA	NA
Vanadium	12	--	µg/L	ND [2.7]	ND [2.7]	ND [2.7]	ND [2.7]	ND [2.7]	ND [2.7]	ND [2.7]
Miscellaneous										
Bicarbonate Alkalinity	--	--	mg/L	620	630	840	480	430	430	430
Carbonate Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA
Chemical Oxygen Demand	--	--	mg/L	34.6	30.5	34.6	24.3 J	ND [20]	ND [20]	ND [20]
Hydroxide Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite Nitrogen	--	--	mg/L	0.039 B	ND [0.1]	ND [0.1]	ND [0.1]	ND [0.1]	ND [0.1]	ND [0.1]
Sulfate	--	--	mg/L	15	14	3.9	43	65	73	74
Total Alkalinity	--	--	mg/L	620	630	840	480	430	430	430
Total Organic Carbon	--	--	mg/L	7.2	7.1	7.5	4.3	3.2	3.5	3.8
Total Suspended Solids	--	--	mg/L	20.1	20.1	22.9	8.8	19.5	21.3	19.7

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POST-CLOSURE GROUNDWATER SAMPLING ANALYTICAL RESULTS SUMMARY

ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER SUPERFUND SITE
KING HIGHWAY LANDFILL OPERABLE UNIT

Sample ID: / Well ID: / Date Collected:	Generic GSI Values	Site Specific WQBEL	Units	H85395 MW-3AR 02/09/07	H85396 MW-7 05/07/07	H85397 MW-2R 05/08/07	H85398 MW-1AR 05/08/07	H85399 MW-11RR 05/08/07	H85400 MW-16A 05/08/07	H85401 Equip. Blank [MW-11RR] 05/08/07
VOCs										
Acetone	1,700	--	µg/L	ND [5.0]	NA	NA	NA	NA	NA	NA
SVOCs										
4-Methylphenol[6]	71	--	µg/L	ND [9.7]	ND [9.7]	ND [9.4]	ND [9.7]	ND [9.7]	ND [9.4]	ND [9.5]
Naphthalene	13	--	µg/L	ND [9.7]	ND [9.7]	ND [9.4]	ND [9.7]	ND [9.7]	ND [9.4]	ND [9.5]
Phenol	210	--	µg/L	ND [9.7]	NA	NA	NA	NA	NA	NA
PCBs										
Aroclor 1016	--	--	µg/L	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.047]	ND [0.048]	ND [0.047]
Aroclor 1221	--	--	µg/L	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.047]	ND [0.048]	ND [0.047]
Aroclor 1232	--	--	µg/L	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.047]	ND [0.048]	ND [0.047]
Aroclor 1242	--	--	µg/L	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.047]	ND [0.048]	ND [0.047]
Aroclor 1248	--	--	µg/L	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.047]	ND [0.048]	ND [0.047]
Aroclor 1254	--	--	µg/L	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.047]	ND [0.048]	ND [0.047]
Aroclor 1260	--	--	µg/L	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.048]	ND [0.047]	ND [0.048]	ND [0.047]
Total PCBs	0.2	--	µg/L	ND	ND	ND	ND	ND	ND	ND
Metals										
Barium	--	2,300	µg/L	428	54.5 B	160 B	421	401	431	ND [11.5]
Calcium	--	--	µg/L	197,000	161,000	154,000	237,000	156,000	173,000	157 B
Chromium[7]	11	--	µg/L	ND [10]	NA	NA	NA	NA	NA	NA
Iron	--	--	µg/L	61,100	3,790	8,490	97,300	4,350	10,900	ND [15.8]
Sodium	--	--	µg/L	72,200	52,400	64,200	3,920 B	82,200	71,300	351 B
Thallium	3.7	160	µg/L	7.7 B	ND [1.1]	ND [1.1]	ND [1.1]	ND [1.1]	ND [1.1]	ND [1.1]
Zinc	--	1,200	µg/L	NA	NA	NA	NA	NA	NA	NA
Vanadium	12	--	µg/L	ND [2.7]	NA	NA	NA	NA	NA	NA
Miscellaneous										
Bicarbonate Alkalinity	--	--	mg/L	560	NA	NA	NA	NA	NA	NA
Carbonate Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA
Chemical Oxygen Demand	--	--	mg/L	ND [20]	22.9	ND [20]	29.3	27.1	20.8	22.9
Hydroxide Alkalinity	--	--	*mg/L*	NA	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite Nitrogen	--	--	mg/L	0.9904	NA	NA	NA	NA	NA	NA
Sulfate	--	--	mg/L	30	NA	NA	NA	NA	NA	NA
Total Alkalinity	--	--	mg/L	560	NA	NA	NA	NA	NA	NA
Total Organic Carbon	--	--	mg/L	4.4	5.5	3.7	5.7	5.4	8.2	ND [1]
Total Suspended Solids	--	--	mg/L	54	NA	NA	NA	NA	NA	NA

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POST-CLOSURE GROUNDWATER SAMPLING ANALYTICAL RESULTS SUMMARY

ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER SUPERFUND SITE
KING HIGHWAY LANDFILL OPERABLE UNIT

Sample ID: / Well ID: / Date Collected:	Generic GSI Values	Site Specific WQBEL	Units	H85402 MW-12B 05/09/07	H85403 MW-16B 05/09/07	H85404 MW-12AR 05/09/07	H85405 MW-13B 05/09/07	H85406 MW-13AR 05/09/07	H85407 MW-8AR 05/10/07	H85408 DUP [MW-8AR] 05/10/07	H85409 MW-8BR 05/10/07
VOCs											
Acetone	1,700	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
SVOCs											
4-Methylphenol[6]	71	--	µg/L	ND [9.6]	ND [9.4]	3.9 J	ND [9.6]	ND [9.4]	ND [10]	ND [9.8]	ND [9.4]
Naphthalene	13	--	µg/L	ND [9.6]	ND [9.4]	ND [9.5]	ND [9.6]	ND [9.4]	ND [10]	ND [9.8]	ND [9.4]
Phenol	210	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
PCBs											
Aroclor 1016	--	--	µg/L	ND [0.048]	ND [0.048]	ND [0.047]	ND [0.048]	ND [0.048] J	ND [0.047]	ND [0.047]	ND [0.047]
Aroclor 1221	--	--	µg/L	ND [0.048]	ND [0.048]	ND [0.047]	ND [0.048]	ND [0.048] J	ND [0.047]	ND [0.047]	ND [0.047]
Aroclor 1232	--	--	µg/L	ND [0.048]	ND [0.048]	ND [0.047]	ND [0.048]	ND [0.048] J	ND [0.047]	ND [0.047]	ND [0.047]
Aroclor 1242	--	--	µg/L	ND [0.048]	ND [0.048]	ND [0.047]	ND [0.048]	ND [0.048] J	ND [0.047]	ND [0.047]	ND [0.047]
Aroclor 1248	--	--	µg/L	ND [0.048]	ND [0.048]	ND [0.047]	ND [0.048]	ND [0.048] J	ND [0.047]	ND [0.047]	ND [0.047]
Aroclor 1254	--	--	µg/L	ND [0.048]	ND [0.048]	ND [0.047]	ND [0.048]	ND [0.048] J	ND [0.047]	ND [0.047]	ND [0.047]
Aroclor 1260	--	--	µg/L	ND [0.048]	ND [0.048]	ND [0.047]	ND [0.048]	ND [0.048] J	ND [0.047]	ND [0.047]	ND [0.047]
Total PCBs	0.2	--	µg/L	ND	ND	ND	ND	ND	ND	ND	ND
Metals											
Barium	--	2,300	µg/L	260	494	629	203	705	482	479	262
Calcium	--	--	µg/L	132,000	154,000	211,000	144,000	308,000	197,000	192,000	153,000
Chromium[7]	11	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
Iron	--	--	µg/L	4,690	8,160	51,200	7,400	87,300	35,000	33,900	10,600
Sodium	--	--	µg/L	89,500	81,400	41,300	96,000	9,040	52,700	51,200	99,600
Thallium	3.7	160	µg/L	ND [1.1]	ND [1.1]	ND [1.1]	ND [1.1]	ND [1.1]	ND [1.1]	ND [1.1]	ND [1.1]
Zinc	--	1,200	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	12	--	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
Miscellaneous											
Bicarbonate Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Carbonate Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Chemical Oxygen Demand	--	--	mg/L	31.4	33.5	37.7	ND [20]	29.3	25	27.1	22.9
Hydroxide Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite Nitrogen	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Total Alkalinity	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	--	--	mg/L	8.2	7.3	12.2	2.9	6.5	9	9.4	4.4
Total Suspended Solids	--	--	mg/L	NA	NA	NA	NA	NA	NA	NA	NA

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9. The WQBEL values are per the MDEQ Surface Water Quality Division, as recommended in a January 22, 1998 interoffice communication.

Definitions of Data Qualifiers:

B - The reported value was obtained from a reading less than the contract required detection limit (CRDL) but greater than or equal to the instrument detection limit (IDL).
E - The reported value is estimated due to the presence of interference.
J - The compound/analyte was positively identified; however, the associated numerical value is an estimated concentration only.
JN - The analysis indicates the presence of a compound/analyte for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.
UJ - The compound/analyte was not detected above the reported sample quantitation/detection limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation/detection.

POST-CLOSURE GROUNDWATER SAMPLING ANALYTICAL RESULTS SUMMARY

ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER SUPERFUND SITE
KING HIGHWAY LANDFILL OPERABLE UNIT

Sample ID: / Well ID: / Date Collected:	Generic GSI Values	Site Specific WQBEL	Units	H85410 MW-15AR 05/10/07	H85411 DUP [MW-15AR] 05/10/07	H85412 MW-14AR 05/10/07	H85413 MW-3AR 05/11/07
VOCs							
Acetone	1,700	--	µg/L	NA	NA	NA	NA
SVOCs							
4-Methylphenol[6]	71	--	µg/L	ND [9.4]	ND [9.4]	ND [9.9]	ND [9.4]
Naphthalene	13	--	µg/L	ND [9.4]	ND [9.4]	ND [9.9]	ND [9.4]
Phenol	210	--	µg/L	NA	NA	NA	NA
PCBs							
Aroclor 1016	--	--	µg/L	ND [0.047]	ND [0.047]	ND [0.047]	ND [0.047]
Aroclor 1221	--	--	µg/L	ND [0.047]	ND [0.047]	ND [0.047]	ND [0.047]
Aroclor 1232	--	--	µg/L	ND [0.047]	ND [0.047]	ND [0.047]	ND [0.047]
Aroclor 1242	--	--	µg/L	ND [0.047]	ND [0.047]	ND [0.047]	ND [0.047]
Aroclor 1248	--	--	µg/L	ND [0.047]	ND [0.047]	ND [0.047]	ND [0.047]
Aroclor 1254	--	--	µg/L	ND [0.047]	ND [0.047]	ND [0.047]	ND [0.047]
Aroclor 1260	--	--	µg/L	ND [0.047]	ND [0.047]	ND [0.047]	ND [0.047]
Total PCBs	0.2	--	µg/L	ND	ND	ND	ND
Metals							
Barium	--	2,300	µg/L	273	249	226	244
Calcium	--	--	µg/L	158,000	154,000	147,000	168,000
Chromium[7]	11	--	µg/L	NA	NA	NA	NA
Iron	--	--	µg/L	10,200	9,940	9,340	33,900
Sodium	--	--	µg/L	154,000	150,000	118,000	104,000
Thallium	3.7	160	µg/L	ND [1.1]	ND [1.1]	ND [1.1]	ND [1.1]
Zinc	--	1,200	µg/L	NA	NA	NA	NA
Vanadium	12	--	µg/L	NA	NA	NA	NA
Miscellaneous							
Bicarbonate Alkalinity	--	--	mg/L	NA	NA	NA	NA
Carbonate Alkalinity	--	--	mg/L	NA	NA	NA	NA
Chemical Oxygen Demand	--	--	mg/L	27.1	ND [20]	ND [20]	31.4
Hydroxide Alkalinity	--	--	mg/L	NA	NA	NA	NA
Nitrate/Nitrite Nitrogen	--	--	mg/L	NA	NA	NA	NA
Sulfate	--	--	mg/L	NA	NA	NA	NA
Total Alkalinity	--	--	mg/L	NA	NA	NA	NA
Total Organic Carbon	--	--	mg/L	4.9	4.7	5	4.7
Total Suspended Solids	--	--	mg/L	NA	NA	NA	NA

Notes:

1. Exceedances of the Groundwater Surface Water Interface (GSI) and/or Waster Quality-Based Effluent Limits (WQBEL) values, where applicable, are indicated by shading.
2. ND - Not detected. Practical quantitation limits are shown in brackets.
3. NA - Not analyzed.
4. µg/L - Micrograms per liter.
5. mg/L - Milligrams per liter.
6. GSI Value is for methylphenols.
7. Total Chromium is being analyzed, but the GSI Value refers to Chromium (VI) oxidation state.
8. The Generic GSI Values are obtained from the KHL-OU Hydrogeologic Monitoring Plan (September 2002).
9. The WQBEL values are per the MDEQ Surface Water Quality Division, as recommended in a January 22, 1998 interoffice communication.

Definitions of Data Qualifiers:

B - The reported value was obtained from a reading less than the contract required detection limit (CRDL) but greater than or equal to the instrument detection limit (IDL).
E - The reported value is estimated due to the presence of interference.
J - The compound/analyte was positively identified; however, the associated numerical value is an estimated concentration only.
JN - The analysis indicates the presence of a compound/analyte for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.
UJ - The compound/analyte was not detected above the reported sample quantitation/detection limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation/detection.

POST-CLOSURE GROUNDWATER SAMPLING ANALYTICAL RESULTS SUMMARY - MDEQ SPLIT SAMPLES

ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER SUPERFUND SITE
KING HIGHWAY LANDFILL OPERABLE UNIT

Sample ID: Well ID: Date Collected:	Generic GSI Value	Units	OU3-MW-11AR-010703 MW-11AR 01/07/03	OU3-MW-1AR-010803 MW-1AR 01/08/03	OU3-MW-8AR-010803 MW-8AR 01/08/03	OU3-MW-16A-01 MW-16A 05/07/03	OU3-MW-12AR-01 MW-12AR 05/08/03	OU3-MW-13AR-01 MW-13AR 05/08/03	OU3-MW-13B-01 MW-13B 05/08/03	OU3-MW-8BR-01 MW-8BR 05/09/03
PCBs										
Aroclor 1016	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.0255]	ND [0.025]
Aroclor 1221	--	µg/L	ND [0.025]	ND [0.025]	0.0754 I	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.0255]	ND [0.025]
Aroclor 1232	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.0255]	ND [0.025]
Aroclor 1242	--	µg/L	ND [0.025]	ND [0.025]	0.0426 II, III	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.0255]	ND [0.025]
Aroclor 1248	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.0255]	ND [0.025]
Aroclor 1254	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.0255]	ND [0.025]
Aroclor 1260	--	µg/L	*ND [0.025]*	*ND [0.025]*	*ND [0.025]*	*ND [0.025]*	*ND [0.025]*	*ND [0.025]*	*ND [0.0255]*	*ND [0.025]*
Total PCBs	0.2	µg/L	ND	ND	0.118 I, II, III	ND	ND	ND	ND	ND

Sample ID: Well ID: Date Collected:	Generic GSI Value	Units	OU3-MW-12B-01 MW-12B 05/09/03	OU3-MW-16B-01 MW-16B 05/09/03	OU3-MW-16A-01 MW-16A 08/13/03	OU3-MW-16B-01 MW-16B 08/13/03	OU3-MW-8AR-01 MW-8AR 08/14/03	OU3-MW-8BR-01 MW-8BR 08/14/03	OU3-MW8AR-01 MW8AR-01 11/06/03	OU3-MW8BR-01 MW8BR-01 11/06/03
PCBs										
Aroclor 1016	--	µg/L	ND [0.025] (ND [0.025])	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025] (ND [0.025])	ND [0.025]	ND [0.025]	ND [0.025] (ND [0.025])
Aroclor 1221	--	µg/L	ND [0.025] (ND [0.025])	ND [0.025]	ND [0.025]	ND [0.025]	0.0793 I (0.0649 I)	ND [0.025]	0.0828 I	ND [0.025] (ND [0.025])
Aroclor 1232	--	µg/L	ND [0.025] (ND [0.025])	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025] (ND [0.025])	ND [0.025]	ND [0.025]	ND [0.025] (ND [0.025])
Aroclor 1242	--	µg/L	ND [0.025] (ND [0.025])	0.0148 J	ND [0.025]	ND [0.025]	0.0625 II,III (0.0523 II,III)	ND [0.025]	0.0527 II, III	ND [0.025] (ND [0.025])
Aroclor 1248	--	µg/L	ND [0.025] (ND [0.025])	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025] (ND [0.025])	ND [0.025]	ND [0.025]	ND [0.025] (ND [0.025])
Aroclor 1254	--	µg/L	ND [0.025] (ND [0.025])	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025] (ND [0.025])	ND [0.025]	ND [0.025]	ND [0.025] (ND [0.025])
Aroclor 1260	--	µg/L	ND [0.025] (ND [0.025])	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025] (ND [0.025])	ND [0.025]	ND [0.025]	ND [0.025] (ND [0.025])
Total PCBs	0.2	µg/L	*ND*	*0.0148 J*	*ND*	*ND*	*0.142 I,II,III (0.118 I,II,III)*	*ND*	*0.136 I, II, III*	*ND*

See Notes on page 11.

POST-CLOSURE GROUNDWATER SAMPLING ANALYTICAL RESULTS SUMMARY - MDEQ SPLIT SAMPLES

ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER SUPERFUND SITE
KING HIGHWAY LANDFILL OPERABLE UNIT

Sample ID: Well ID: Date Collected:	Generic GSI Value	Units	OU3-MW16A-01 MW16A-01 11/07/03	OU3-MW16B-01 MW16B-01 11/07/03	OU3-MW15AR-01 MW15AR-01 11/10/03	OU3-MW8AR-01 MW-8AR 02/26/04	OU3-MW12AR-01 MW-12AR 02/26/04	OU3-MW13AR-01 MW-13AR 02/26/04	OU3-MW15AR-01 MW-15AR 03/01/04	OU3-MW16B-01 MW-16B 02/25/04
PCBs										
Aroclor 1016	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025] (ND [0.025])	ND [0.025]	ND [0.025] (ND [0.025])
Aroclor 1221	--	µg/L	ND [0.025]	ND [0.025]	0.0299 I	0.0803 I	ND [0.025]	ND [0.025] (ND [0.025])	0.0325 I	ND [0.025] (ND [0.025])
Aroclor 1232	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025] (ND [0.025])	ND [0.025]	ND [0.025] (ND [0.025])
Aroclor 1242	--	µg/L	ND [0.025]	0.009 J	ND [0.025]	0.0612 II	ND [0.025]	ND [0.025] (ND [0.025])	ND [0.025]	ND [0.025] (ND [0.025])
Aroclor 1248	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025] (ND [0.025])	ND [0.025]	ND [0.025] (ND [0.025])
Aroclor 1254	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025] (ND [0.025])	ND [0.025]	ND [0.025] (ND [0.025])
Aroclor 1260	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025] (ND [0.025])	ND [0.025]	ND [0.025] (ND [0.025])
Total PCBs	0.2	µg/L	ND	0.009 J	0.0299 I	0.142 I, II	ND	ND	0.0325 I	ND

Sample ID: Well ID: Date Collected:	Generic GSI Value	Units	OU3-MW16B-01 MW-16B 05/19/04	OU3-MW8AR-01 MW-8AR 05/20/04	OU3-MW14AR-01 MW-14AR 05/20/04	OU3-MW3AR-01 MW3-AR 05/21/04	OU3-MW15AR-01 MW-15AR 05/21/04	OU3-MW1AR-01 MW-1AR 08/02/04	OU3-MW2R-01 MW-2R 08/03/04	OU3-MW3AR-01 MW-3AR 08/06/04
PCBs										
Aroclor 1016	--	µg/L	ND [0.025]	ND [0.025] (ND [0.025])	ND [0.025]	ND [0.025]	ND [0.025] (ND [0.025])	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1221	--	µg/L	ND [0.025]	0.0824 I (0.0549 I)	ND [0.025]	ND [0.025]	ND [0.025] (ND [0.025])	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1232	--	µg/L	ND [0.025]	ND [0.025] (ND [0.025])	ND [0.025]	ND [0.025]	ND [0.025] (ND [0.025])	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1242	--	µg/L	ND [0.025]	0.0529 II (0.042 II)	ND [0.025]	ND [0.025]	ND [0.025] (ND [0.025])	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1248	--	µg/L	ND [0.025]	ND [0.025] (ND [0.025])	ND [0.025]	ND [0.025]	ND [0.025] (ND [0.025])	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1254	--	µg/L	ND [0.025]	ND [0.025] (ND [0.025])	ND [0.025]	ND [0.025]	ND [0.025] (ND [0.025])	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1260	--	µg/L	ND [0.025]	ND [0.025] (ND [0.025])	ND [0.025]	ND [0.025]	ND [0.025] (ND [0.025])	ND [0.025]	ND [0.025]	ND [0.025]
Total PCBs	0.2	µg/L	ND	0.135 I, II (0.0969 I, II)	ND	ND	ND	ND	ND	ND

See Notes on page 11.

POST-CLOSURE GROUNDWATER SAMPLING ANALYTICAL RESULTS SUMMARY - MDEQ SPLIT SAMPLES

ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER SUPERFUND SITE
KING HIGHWAY LANDFILL OPERABLE UNIT

Sample ID: Well ID: Date Collected:	Generic GSI Value	Units	OU3-MW7-01 MW-7 08/02/04	OU3-MW8AR-01 MW-8AR 08/05/04	OU3-MW8BR-01 MW-8BR 08/05/04	OU3-MW11RR-01 MW-11RR 08/03/04	OU3-MW12B-01 MW-12B 08/04/04	OU3-MW13AR-01 MW-13AR 08/04/04	OU3-MW13B-01 MW-13B 08/04/04	OU3-MW14AR-01 MW-14AR 08/05/04
PCBs										
Aroclor 1016	--	µg/L	ND [0.025] (ND [0.025])	ND [0.025] (ND [0.025])	ND [0.025] (ND [0.025])	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1221	--	µg/L	ND [0.025] (ND [0.025])	0.0826 I (ND [0.025])	ND [0.025] (ND [0.025])	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1232	--	µg/L	ND [0.025] (ND [0.025])	ND [0.025] (ND [0.025])	ND [0.025] (ND [0.025])	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1242	--	µg/L	ND [0.025] (ND [0.025])	0.0701 II (ND [0.025])	ND [0.025] (ND [0.025])	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1248	--	µg/L	ND [0.025] (ND [0.025])	ND [0.025] (ND [0.025])	ND [0.025] (ND [0.025])	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1254	--	µg/L	ND [0.025] (ND [0.025])	ND [0.025] (ND [0.025])	ND [0.025] (ND [0.025])	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1260	--	µg/L	ND [0.025] (ND [0.025])	ND [0.025] (ND [0.025])	ND [0.025] (ND [0.025])	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]
Total PCBs	0.2	µg/L	ND	0.153 I, II (ND)	ND	ND	ND	ND	ND	ND

Sample ID: Well ID: Date Collected:	Generic GSI Value	Units	OU3-MW15AR-01 MW-15AR 08/06/04	OU3-MW16A-01 MW-16A 08/03/04	OU3-MW16B-01 MW-16B 08/03/04	OU3-MW1AR-01 MW-1AR 11/15/04	OU3-MW3AR-01 MW-3AR 11/18/04	OU3-MW7-01 MW-7 11/15/04	OU3-MW8AR-01 MW-8AR 11/17/04	OU3-MW8BR-01 MW-8BR 11/17/04
PCBs										
Aroclor 1016	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1221	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	0.044 I	ND [0.025]
Aroclor 1232	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1242	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	0.05 II	ND [0.025]
Aroclor 1248	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1254	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1260	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]
Total PCBs	0.2	µg/L	ND	ND	ND	ND	ND	ND	0.094 I, II	ND

See Notes on page 11.

POST-CLOSURE GROUNDWATER SAMPLING ANALYTICAL RESULTS SUMMARY - MDEQ SPLIT SAMPLES

ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER SUPERFUND SITE
KING HIGHWAY LANDFILL OPERABLE UNIT

Sample ID: Well ID: Date Collected:	Generic GSI Value	Units	OU3-MW12AR-01 MW-12AR 11/17/04	OU3-MW12B-01 MW-12B 11/16/04	OU3-MW13AR-01 MW-13AR 11/17/04	OU3-MW13B-01 MW-13B 11/17/04	OU3-MW14AR-01 MW-14AR 11/18/04	OU3-MW14AR-02 MW-14AR 11/18/04	OU3-MW14AR-03 MW-14AR 11/18/04	OU3-MW15AR-01 MW-15AR 11/18/04
PCBs										
Aroclor 1016	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025] (ND [0.025])	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1221	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025] (ND [0.025])	ND [0.025]	ND [0.025]	0.031 I
Aroclor 1232	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025] (ND [0.025])	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1242	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025] (ND [0.025])	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1248	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025] (ND [0.025])	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1254	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025] (ND [0.025])	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1260	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025] (ND [0.025])	ND [0.025]	ND [0.025]	ND [0.025]
Total PCBs	0.2	µg/L	ND	ND	ND	ND	ND	ND	ND	0.031 I

Sample ID: Well ID: Date Collected:	Generic GSI Value	Units	OU3-MW16A-01 MW-16A 11/16/04	OU3-MW16B-01 MW-16B 11/16/04	OU3-MW3AR-01 MW-3AR 02/11/05	OU3-MW7-01 MW-7 02/07/05	OU3-MW8AR-01 MW-8AR 02/10/05	OU3-MW8BR-01 MW-8BR 02/10/05	OU3-MW11RR-01 MW-11RR 02/08/05	OU3-MW11RR-02 MW-11RR 02/08/05
PCBs										
Aroclor 1016	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1221	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	0.0518 I	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1232	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1242	--	µg/L	ND [0.025]	ND [0.025]	0.025 UJ	0.025 UJ	0.0335 II J	0.025 UJ	0.025 UJ	0.025 UJ
Aroclor 1248	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1254	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1260	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]
Total PCBs	0.2	µg/L	ND	ND	0.025 UJ	0.025 UJ	0.0853 I, II, J	0.025 UJ	0.025 UJ	0.025 UJ

See Notes on page 11.

POST-CLOSURE GROUNDWATER SAMPLING ANALYTICAL RESULTS SUMMARY - MDEQ SPLIT SAMPLES

ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER SUPERFUND SITE
KING HIGHWAY LANDFILL OPERABLE UNIT

Sample ID: / Well ID: / Date Collected:	Generic GSI Value	Units	OU3-MW12AR-01 MW-12AR 02/09/05	OU3-MW12B-01 MW-12B 02/09/05	OU3-MW13AR-01 MW-13AR 02/09/05	OU3-MW13B-01 MW-13B 02/09/05	OU3-MW14AR-01 MW-14AR 02/11/05	OU3-MW15AR-01 MW-15AR 02/11/05	OU3-MW16A-01 MW-16A 02/08/05	OU3-MW16B-01 MW-16B 02/08/05
PCBs										
Aroclor 1016	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025] (ND [0.025])	ND [0.025]	ND [0.025]	ND [0.025] (ND [0.025])	ND [0.025]	ND [0.025]
Aroclor 1221	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025] (ND [0.025])	ND [0.025]	ND [0.025]	0.0318 I (0.0367 I)	ND [0.025]	ND [0.025]
Aroclor 1232	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025] (ND [0.025])	ND [0.025]	ND [0.025]	ND [0.025] (ND [0.025])	ND [0.025]	ND [0.025]
Aroclor 1242	--	µg/L	0.025 UJ	0.025 UJ	0.025 UJ (0.025 UJ)	0.025 UJ	0.025 UJ	0.025 UJ (0.025 UJ)	0.025 UJ	0.025 UJ
Aroclor 1248	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025] (ND [0.025])	ND [0.025]	ND [0.025]	ND [0.025] (ND [0.025])	ND [0.025]	ND [0.025]
Aroclor 1254	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025] (ND [0.025])	ND [0.025]	ND [0.025]	ND [0.025] (ND [0.025])	ND [0.025]	ND [0.025]
Aroclor 1260	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025] (ND [0.025])	ND [0.025]	ND [0.025]	ND [0.025] (ND [0.025])	ND [0.025]	ND [0.025]
Total PCBs	0.2	µg/L	0.025 UJ	0.025 UJ	0.025 UJ (0.025 UJ)	0.025 UJ	0.025 UJ	0.0568 UJ (0.0617 UJ)	0.025 UJ	0.025 UJ

Sample ID: / Well ID: / Date Collected:	Generic GSI Value	Units	OU3-MW1AR-01 MW-1AR 05/24/05	OU3-MW2R-01 MW-2R 05/23/05	OU3-MW3AR-01 MW-3AR 05/26/05	OU3-MW7-01 MW-7 05/23/05	OU3-MW8AR-01 MW-8AR 05/25/05	OU3-MW8AR-02 MW-8AR 05/25/05	OU3-MW11RR-01 MW-11RR 05/24/05	OU3-MW12AR-01 MW-12AR 05/24/05
PCBs										
Aroclor 1016	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.0284]	ND [0.025]
Aroclor 1221	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	0.113 I	ND [0.025]	ND [0.0284]	ND [0.025]
Aroclor 1232	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.0284]	ND [0.025]
Aroclor 1242	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	0.0755 II	ND [0.025]	ND [0.0284]	ND [0.025]
Aroclor 1248	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.0284]	ND [0.025]
Aroclor 1254	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.0284]	ND [0.025]
Aroclor 1260	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.0284]	ND [0.025]
Total PCBs	0.2	µg/L	ND	ND	ND	ND	0.1885 I, II	ND	ND	ND

See Notes on page 11.

POST-CLOSURE GROUNDWATER SAMPLING ANALYTICAL RESULTS SUMMARY - MDEQ SPLIT SAMPLES

ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER SUPERFUND SITE
KING HIGHWAY LANDFILL OPERABLE UNIT

Sample ID: Well ID: Date Collected:	Generic GSI Value	Units	OU3-MW12B-01 MW-12B 05/24/05	OU3-MW13AR-01 MW-13AR 05/25/05	OU3-MW13AR-03 MW-13AR 05/25/05	OU3-MW13B-01 MW-13B 05/25/05	OU3-MW14AR-01 MW-14AR 05/26/05	OU3-MW15AR-01 MW-15AR 05/26/05	OU3-MW15AR-03 MW-15AR 05/26/05	OU3-MW16A-01 MW-16A 05/24/05
PCBs										
Aroclor 1016	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1221	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	0.0497 I	0.0513 I	ND [0.025]
Aroclor 1232	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1242	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1248	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1254	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1260	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]
Total PCBs	0.2	µg/L	ND	ND	ND	ND	ND	0.0497 I	0.0513 I	ND

Sample ID: Well ID: Date Collected:	Generic GSI Value	Units	OU3-MW16B-01 MW-16B 05/24/05	OU3-MW1AR-01 MW-1AR 08/15/05	OU3-MW2R-01 MW-2R 08/16/05	OU3-MW-3AR-01 MW-3AR 08/18/05	OU3-MW7-01 MW-7 08/15/05	OU3-MW8AR-01 MW-8AR 08/17/05	OU3-MW11RR-01 MW-11RR 08/16/05	OU3-MW11RR-02 MW-11RR 08/16/05
PCBs										
Aroclor 1016	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1221	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	0.0372 I	ND [0.025]	0.0788 I	ND [0.025]	ND [0.025]
Aroclor 1232	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1242	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	0.0285 II	ND [0.025]	0.0595 II	ND [0.025]	ND [0.025]
Aroclor 1248	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1254	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1260	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]
Total PCBs	0.2	µg/L	ND	ND	ND	0.0657 I, II	ND	0.1383 I, II	ND	ND

See Notes on page 11.

POST-CLOSURE GROUNDWATER SAMPLING ANALYTICAL RESULTS SUMMARY - MDEQ SPLIT SAMPLES

ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER SUPERFUND SITE
KING HIGHWAY LANDFILL OPERABLE UNIT

Sample ID: Well ID: Date Collected:	Generic GSI Value	Units	OU3-MW15AR-01 MW-15AR 08/18/05	OU3-MW-16B-01 MW-16B 08/17/05	OU3-MW-16B-03 MW-16B 08/17/05	OU3-MW3AR-01 MW-3AR 11/11/05	OU3-MW8AR-01 MW-8AR 11/10/05	OU3-MW8AR-03 MW-8AR 11/10/05	OU3-MW8BR-01 MW-8BR 11/10/05	OU3-MW13AR-01 MW-13AR 11/10/05
PCBs										
Aroclor 1016	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1221	--	µg/L	0.0598 I	ND [0.025]	ND [0.025]	ND [0.025]	0.0761 I	0.0747 I	ND [0.025]	ND [0.025]
Aroclor 1232	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1242	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	0.0716 II	0.0702 II	ND [0.025]	ND [0.025]
Aroclor 1248	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1254	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1260	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]
Total PCBs	0.2	µg/L	0.0598 I	ND	ND	ND	0.1477 I, II	0.1449 I, II	ND	ND

Sample ID: Well ID: Date Collected:	Generic GSI Value	Units	OU3-MW13B-01 MW-13B 11/10/05	OU3-MW14AR-01 MW-14AR 11/11/05	OU3-MW15AR-01 MW-15AR 11/11/05	OU3-MW3AR-01 MW-3AR 02/10/06	OU3-MW8AR-01 MW-8AR 02/10/06	OU3-MW8AR-03 MW-8AR 02/10/06	OU3-MW8BR-01 MW-8BR 02/09/06	OU3-MW11AR-01 MW-11AR 02/08/06
PCBs										
Aroclor 1016	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1221	--	µg/L	ND [0.025]	ND [0.025]	0.0330 I	ND [0.025]	0.0289 PB	0.0392 PB	ND [0.025]	ND [0.025]
Aroclor 1232	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1242	--	µg/L	ND [0.025]	ND [0.025]	0.0280 II	ND [0.025]	0.0299 AD	0.0286 AD	ND [0.025]	ND [0.025]
Aroclor 1248	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1254	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1260	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]
Total PCBs	0.2	µg/L	ND	ND	0.061 I, II	ND	0.0588 PB, AD	0.0678 PB, AD	ND	ND

See Notes on page 11.

POST-CLOSURE GROUNDWATER SAMPLING ANALYTICAL RESULTS SUMMARY - MDEQ SPLIT SAMPLES

ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER SUPERFUND SITE
KING HIGHWAY LANDFILL OPERABLE UNIT

Sample ID: Well ID: Date Collected:	Generic GSI Value	Units	OU3-MW12AR-01 MW-12AR 02/09/06	OU3-MW12B-01 MW-12B 02/09/06	OU3-MW13AR-01 MW-13AR 02/09/06	OU3-MW13B-01 MW-13B 02/09/06	OU3-MW14AR-01 MW-14AR 02/10/06	OU3-MW15AR-01 MW-15AR 02/10/06	OU3-MW16A-01 MW-16A 02/09/06	OU3-MW16B-01 MW-16B 02/09/06
PCBs										
Aroclor 1016	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1221	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	0.0254 PB	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1232	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1242	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1248	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1254	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1260	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]
Total PCBs	0.2	µg/L	ND	ND	ND	ND	0.0254 PB	ND	ND	ND

Sample ID: Well ID: Date Collected:	Generic GSI Value	Units	OU3-MW2R-01 MW-2R 05/08/06	OU3-MW11RR-02 MW-11RR 05/09/06	OU3-MW8AR-01 MW-8AR 05/10/06	OU3-MW8BR-01 MW-8BR 05/10/06	OU3-MW3AR-01 MW-3AR 05/11/06	OU3-MW11RR-01 MW-11RR 05/11/06	OU3-MW14AR-01 MW-14AR 05/11/06	OU3-MW15AR-01 MW-15AR 05/11/06
PCBs										
Aroclor 1016	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1221	--	µg/L	ND [0.025]	ND [0.025]	0.03 PB	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	0.0351 PB
Aroclor 1232	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1242	--	µg/L	ND [0.025]	ND [0.025]	0.0315 AD	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1248	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1254	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1260	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]
Total PCBs	0.2	µg/L	ND	ND	0.0615 PB, AD	ND	ND	ND	ND	0.0351 PB

See Notes on page 11.

POST-CLOSURE GROUNDWATER SAMPLING ANALYTICAL RESULTS SUMMARY - MDEQ SPLIT SAMPLES

ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER SUPERFUND SITE
KING HIGHWAY LANDFILL OPERABLE UNIT

Sample ID: Well ID: Date Collected:	Generic GSI Value	Units	OU3-MW15AR-03 MW-15AR 05/11/06	OU3-MW16B-01 MW-16B 05/11/06	OU3-MW2R-01 MW-2R 08/21/06	OU3-MW3AR-01 MW-3AR 08/25/06	OU3-MW8AR-01 MW-8AR 08/24/06	OU3-MW8AR-03 MW-8AR 08/24/06	OU3-MW8BR-01 MW-8BR 08/24/06	OU3-MW11RR-01 MW-11RR 08/22/06
PCBs										
Aroclor 1016	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1221	--	µg/L	0.0444 PB	ND [0.025]	ND [0.025]	ND [0.025]	0.046 PB	0.0345 PB	ND [0.025]	ND [0.025]
Aroclor 1232	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1242	--	µg/L	0.0438 AD	ND [0.025]	ND [0.025]	ND [0.025]	0.0362 AD	0.0374 AD	ND [0.025]	ND [0.025]
Aroclor 1248	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1254	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1260	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]
Total PCBs	0.2	µg/L	0.0082 PB, AD	ND	ND	ND	0.0822 PB, AD	0.0719 PB, AD	ND	ND

Sample ID: Well ID: Date Collected:	Generic GSI Value	Units	OU3-MW11RR-02 MW-11RR 08/22/06	OU3-MW14AR-01 MW-14AR 08/24/06	OU3-MW15AR-01 MW-15AR 08/25/06	OU3-MW16B-01 MW-16B 08/22/06	OU3-MW1AR-01 MW-1AR 11/07/06	OU3-MW3AR-01 MW-3AR 11/10/06	OU3-MW8AR-01 MW-8AR 11/09/06	OU3-MW14AR-01 MW-14AR 11/09/06
PCBs										
Aroclor 1016	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1221	--	µg/L	ND [0.025]	ND [0.025]	0.0527 PB	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1232	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1242	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1248	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1254	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1260	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]
Total PCBs	0.2	µg/L	ND	ND	0.0527 PB	ND	ND	ND	ND	ND

See Notes on page 11.

POST-CLOSURE GROUNDWATER SAMPLING ANALYTICAL RESULTS SUMMARY - MDEQ SPLIT SAMPLES

ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER SUPERFUND SITE
KING HIGHWAY LANDFILL OPERABLE UNIT

Sample ID: / Well ID: / Date Collected:	Generic GSI Value	Units	OU3-MW15AR-01 MW-15AR 11/10/06	OU3-MW16B-01 MW-16B 11/08/06	OU3-MW16B-02 MW-16B 11/08/06	OU3-MW3AR-01 MW-3AR 02/09/07	OU3-MW8AR-01 MW-8AR 02/08/07	OU3-MW8AR-03 MW-8AR 02/08/07	OU3-MW11RR-02 MW-11RR 02/06/07	OU3-MW12AR-01 MW-12AR 02/07/07
PCBs										
Aroclor 1016	--	µg/L	ND [0.025]	ND [0.025] (ND [0.025])	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.0278]	ND [0.025]
Aroclor 1221	--	µg/L	0.042 PB	ND [0.025] (ND [0.025])	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.0278]	ND [0.025]
Aroclor 1232	--	µg/L	ND [0.025]	ND [0.025] (ND [0.025])	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.0278]	ND [0.025]
Aroclor 1242	--	µg/L	ND [0.025]	ND [0.025] (ND [0.025])	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.0278]	ND [0.025]
Aroclor 1248	--	µg/L	ND [0.025]	ND [0.025] (ND [0.025])	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.0278]	ND [0.025]
Aroclor 1254	--	µg/L	ND [0.025]	ND [0.025] (ND [0.025])	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.0278]	ND [0.025]
Aroclor 1260	--	µg/L	ND [0.025]	ND [0.025] (ND [0.025])	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.0278]	ND [0.025]
Total PCBs	0.2	µg/L	0.042 PB	ND	ND	ND	ND	ND	ND	ND

Sample ID: / Well ID: / Date Collected:	Generic GSI Value	Units	OU3-MW12B-01 MW-12B 02/07/07	OU3-MW13AR-01 MW-13AR 02/08/07	OU3-MW13B-01 MW-13B 02/07/07	OU3-MW14AR-01 MW-14AR 02/09/07	OU3-MW15AR-01 MW-15AR 02/09/07	OU3-MW16A-01 MW-16A 02/06/07	OU3-MW3AR-01 MW-3AR 05/11/07	OU3-MW-07-01 MW-7 05/07/07
PCBs										
Aroclor 1016	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.0253]	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1221	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	0.0347 PB	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1232	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.0253]	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1242	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.0253]	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1248	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.0253]	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1254	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.0253]	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1260	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.0253]	ND [0.025]	ND [0.025]	ND [0.025]
Total PCBs	0.2	µg/L	ND	ND	ND	ND	0.0347 PB	ND	ND	ND

See Notes on page 11.

DRAFT

POST-CLOSURE GROUNDWATER SAMPLING ANALYTICAL RESULTS SUMMARY - MDEQ SPLIT SAMPLES

ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER SUPERFUND SITE
KING HIGHWAY LANDFILL OPERABLE UNIT

Sample ID: Well ID: Date Collected:	Generic GSI Value	Units	OU3-MW8AR-01 MW-8AR 05/10/07	OU3-MW8AR-03 MW-8AR 05/10/07	OU3-MW-11RR-02 MW-11RR 05/08/07	OU3-MW14AR-01 MW-14AR 05/10/07	OU3-MW15AR-01 MW-15AR 05/10/07
PCBs							
Aroclor 1016	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1221	--	µg/L	0.0446 PB	0.0324 PB	ND [0.025]	ND [0.025]	0.0279 PB
Aroclor 1232	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1242	--	µg/L	0.0264 AD	0.0273 AD	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1248	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1254	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]
Aroclor 1260	--	µg/L	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]	ND [0.025]
Total PCBs	0.2	µg/L	0.071 PB, AD	0.0597 PB, AD	ND	ND	0.0279 PB

Notes:

1. Groundwater analytical results were provided by CDM; groundwater samples were analyzed by Northeast Analytical, Inc.
2. *Practical quantitation limits are shown in brackets.*
3. Exceedances of the GSI values are indicated by shading.
4. Duplicate sample results are shown in parenthesis.
5. ND - Not detected.
6. GSI - Groundwater/Surface Water Interface.
7. µg/L- Micrograms per liter.

Definitions of Data Qualifiers:

I /PB - Aroclor 1221 is being used to report an altered PCB pattern exhibited by the sample. Actual Aroclor 1221 is not present in the sample, but is reported to more accurately quantify PCBs present in samples that have undergone process alteration.
II/AD - Aroclor 1242 is being reported as the best aroclor match. The sample exhibits an altered PCB pattern.
III -The aroclor pattern exhibited by this sample has an enhanced front end pattern compared to an aroclor standard.
J - Indicates an estimated value.
UJ - The analyte was not detected in the sample at a concentration greater than the Practical Quantitation Limit [PQL]; however, the reported limit is approximate and may or may not represent the actual limit of quantitation.

Attachment 3

Photos Documenting Site Conditions

Allied Paper Inc./Portage Creek/Kalamazoo River Superfund Site
King Highway Landfill OU3

Photo Log

Picture	Date	Description
1	8/1/2007	KHL looking north, pore water outlet along fence
2	8/1/2007	KHL looking west, fence and southern berm of sedimentation basin
3	8/1/2007	KHL looking south, locked gas well
4	8/1/2007	KHL looking west, vegetative cover, diversion berm, and gas vents
5	8/1/2007	KHL looking southeast, locked gas well in front of fence along Kalamazoo River
6	8/1/2007	KHL looking southwest, pore water outlet
7	8/1/2007	KHL looking north, north pore water and surface water outlet
8	8/1/2007	KHL Looking west, riprap along sheet pile wall and Kalamazoo River

1.

2.

3.

4.

5.

6.

7.

8.

Attachment 4

Site Inspection Report

Please note that "O&M" is referred to throughout this checklist. At sites where Long-Term Response Actions are in progress, O&M activities may be referred to as "system operations" since these sites are not considered to be in the O&M phase while being remediated under the Superfund program.

Five-Year Review Site Inspection Checklist (Template)

(Working document for site inspection. Information may be completed by hand and attached to the five-year review report as supporting documentation of site status. "N/A" refers to "not applicable.")

I. SITE INFORMATION	
Site name: King Highway Landfill	**Date of inspection:** August 1, 2007
Location and Region: Kalamazoo, MI	**EPA ID:** MID 006007306
Agency, office, or company leading the five-year review: US EPA.	**Weather/temperature:** Sunny, 90°F

Remedy Includes: (Check all that apply)
- X Landfill cover/containment
- X Access controls
- X Institutional controls
- G Groundwater pump and treatment
- G Surface water collection and treatment
- G Other Groundwater monitoring

Attachments: X Inspection team roster attached G Site map attached

II. INTERVIEWS (Check all that apply)

1. **O&M site manager** Mike Hassett P.E Senior Project Manager 8/1/07
   Name ARCADIS, BBL Title Engineer Date
   Interviewed X at site G at office G by phone Phone no. 315-671-9266
   Problems, suggestions; G Report attached

2. **O&M staff** Chase Fortenberry Georgia-Pacific 8/1/07
   Name Title Date
   Interviewed X at site G at office G by phone Phone no. 404-652-6166
   Problems, suggestions; G Report attached

3. Mark Braun, Georgia Pacific 8/1/07
   Interviewed at site X 508-317-2007

3. **Local regulatory authorities and response agencies** (i.e., State and Tribal offices, emergency response office, police department, office of public health or environmental health, zoning office, recorder of deeds, or other city and county offices, etc.) Fill in all that apply.

Agency MDEQ
Contact Keith Krawczyk — Environmental Quality Analyst — 8/1/07 — 517-335-4103
Name — Title — Date — Phone no.
Problems; suggestions; **G** Report attached _____

Agency _____
Contact _____ — _____ — _____ — _____
Name — Title — Date — Phone no.
Problems; suggestions; **G** Report attached _____

Agency _____
Contact _____ — _____ — _____ — _____
Name — Title — Date — Phone no.
Problems; suggestions; **G** Report attached _____

Agency _____
Contact _____ — _____ — _____ — _____
Name — Title — Date — Phone no.
Problems; suggestions; **G** Report attached _____

4. **Other interviews** (optional) **G** Report attached.

III. ONSITE DOCUMENTS & RECORDS VERIFIED (Check all that apply)

1. **O&M Documents**
   - ☒ O&M manual (Draft) — ☒ Readily available — ☒ Up to date — G N/A
   - G As-built drawings — G Readily available — G Up to date — G N/A
   - G Maintenance logs — G Readily available — G Up to date — G N/A

   Remarks

2. **Site-Specific Health and Safety Plan** — ☒ Readily available — ☒ Up to date — G N/A
   - G Contingency plan/emergency response plan — G Readily available — G Up to date — G N/A

   Remarks

3. **O&M and OSHA Training Records** — G Readily available — G Up to date — ☒ N/A

   Remarks N/A

4. **Permits and Service Agreements**
   - G Air discharge permit — G Readily available — G Up to date — ☒ N/A
   - G Effluent discharge — G Readily available — G Up to date — ☒ N/A
   - G Waste disposal, POTW — G Readily available — G Up to date — ☒ N/A
   - G Other permits ____ — G Readily available — G Up to date — ☒ N/A

   Remarks N/A

5. **Gas Generation Records** — ☒ Readily available — ☒ Up to date — G N/A

   Remarks Quartly monitoring reports sent to MDEQ.

6. **Settlement Monument Records** — G Readily available — G Up to date — ☒ N/A

   Remarks N/A

7. **Groundwater Monitoring Records** — ☒ Readily available — ☒ Up to date — G N/A

   Remarks Quartely manitoring reports sent to MDEQ

8. **Leachate Extraction Records** — G Readily available — G Up to date — ☒ N/A

   Remarks

9. **Discharge Compliance Records**
   - G Air — G Readily available — G Up to date — ☒ N/A
   - G Water (effluent) — G Readily available — G Up to date — ☒ N/A

   Remarks

10. **Daily Access/Security Logs** — G Readily available — G Up to date — G N/A

    Remarks Site secured by chain-link fence. There is no field office trailer on-site since the landfill is closed & is in post-closure O+M.

IV. O&M COSTS

1. **O&M Organization**
G State in-house G Contractor for State
G PRP in-house X Contractor for PRP - Steve Taplin
G Other _____

2. **O&M Cost Records**
G Readily available G Up to date
X Funding mechanism/agreement in place
Original O&M cost estimate $3.75 Million. G Breakdown attached

(Cost records not available at time of FYR)

Total annual cost by year for review period if available

From _____ Date	To _____ Date	_____ Total cost	G Breakdown attached
From _____ Date	To _____ Date	_____ Total cost	G Breakdown attached
From _____ Date	To _____ Date	_____ Total cost	G Breakdown attached
From _____ Date	To _____ Date	_____ Total cost	G Breakdown attached
From _____ Date	To _____ Date	_____ Total cost	G Breakdown attached

3. **Unanticipated or Unusually High O&M Costs During Review Period**
Describe costs and reasons: _____

V. ACCESS AND INSTITUTIONAL CONTROLS X Applicable G N/A

A. Fencing

1. **Fencing damaged** G Location shown on site map G Gates secured G N/A
Remarks Fence in good condition; site is secured and prevents public access to the landfill.

B. Other Access Restrictions

1. **Signs and other security measures** G Location shown on site map G N/A
Remarks Warning Signs posted every 200 feet with exception of

C. Institutional Controls PRP will submit an IC Evaluation Study Report to USEPA by Sept. 2007. the report will contain an evaluation of existing ICs. USEPA will develop the IC Plan within 6 months of the date of signing the Five-Year Review

1. **Implementation and enforcement**
Site conditions imply ICs not properly implemented G Yes G No G N/A
Site conditions imply ICs not being fully enforced G Yes G No G N/A

Type of monitoring (e.g., self-reporting, drive by) _____
Frequency _____
Responsible party/agency PRP
Contact Mike Hassett. Senior Project Manager with ARCADIS BBL 8/1/07 _____
Name Title Date Phone no.

Reporting is up-to-date G Yes G No G N/A
Reports are verified by the lead agency G Yes G No G N/A

Specific requirements in deed or decision documents have been met G Yes G No G N/A
Violations have been reported G Yes G No G N/A
Other problems or suggestions: G Report attached

2. **Adequacy** G ICs are adequate G ICs are inadequate G N/A
Remarks See notes above

D. General

1. **Vandalism/trespassing** G Location shown on site map X No vandalism evident
Remarks No evidence of vandalism/trespassing; fence restricts access to the public

2. **Land use changes onsite** X N/A
Remarks

3. **Land use changes offsite** X N/A
Remarks

VI. GENERAL SITE CONDITIONS

A. Roads ☒ Applicable ☐ N/A

1. **Roads damaged** ☐ Location shown on site map ☒ Roads adequate ☐ N/A
   Remarks_____

B. Other Site Conditions

Remarks_____

VII. LANDFILL COVERS ☒ Applicable ☐ N/A

A. Landfill Surface

1. **Settlement** (Low spots) ☐ Location shown on site map ☒ Settlement not evident
   Areal extent_____ Depth_____
   Remarks_____

2. **Cracks** ☐ Location shown on site map ☒ Cracking not evident
   Lengths_____ Widths_____ Depths_____
   Remarks_____

3. **Erosion** ☐ Location shown on site map ☒ Erosion not evident
   Areal extent_____ Depth_____
   Remarks_____

4. **Holes** ☐ Location shown on site map ☒ Holes not evident
   Areal extent_____ Depth_____
   Remarks_____

5. **Vegetative Cover** ☒ Grass ☐ Cover properly established ☐ No signs of stress
   ☐ Trees/Shrubs (indicate size and locations on a diagram)
   Remarks Vegetation stressed due to lack of precipitation during summer months.

6. **Alternative Cover (armored rock, concrete, etc.)** ☒ N/A
   Remarks_____

7. **Bulges** G Location shown on site map X G Bulges not evident
Areal extent_____ Height_____
Remarks_____

8. **Wet Areas/Water Damage** X G Wet areas/water damage not evident
G Wet areas G Location shown on site map Areal extent_____
G Ponding G Location shown on site map Areal extent_____
G Seeps G Location shown on site map Areal extent_____
G Soft subgrade G Location shown on site map Areal extent_____
Remarks_____

9. **Slope Instability** G Slides G Location shown on site map X G No evidence of slope instability
Areal extent_____
Remarks_____

B. Benches G Applicable X G N/A
(Horizontally constructed mounds of earth placed across a steep landfill side slope to interrupt the slope in order to slow down the velocity of surface runoff and intercept and convey the runoff to a lined channel.)

1. **Flows Bypass Bench** G Location shown on site map X G N/A or okay
Remarks_____

2. **Bench Breached** G Location shown on site map X G N/A or okay
Remarks_____

3. **Bench Overtopped** G Location shown on site map X G N/A or okay
Remarks_____

C. Letdown Channels X G Applicable G N/A
(Channel lined with erosion control mats, riprap, grout bags, or gabions that descend down the steep side slope of the cover and will allow the runoff water collected by the benches to move off of the landfill cover without creating erosion gullies.)

1. **Settlement** G Location shown on site map X G No evidence of settlement
Areal extent_____ Depth_____
Remarks_____

2. **Material Degradation** G Location shown on site map X G No evidence of degradation
Material type_____ Areal extent_____
Remarks_____

3. **Erosion** G Location shown on site map G No evidence of erosion
Areal extent_____ Depth_____
Remarks_____

4. **Undercutting** G Location shown on site map G No evidence of undercutting
Areal extent_____ Depth_____
Remarks_____

5. **Obstructions** Type_____ G No obstructions
G Location shown on site map Areal extent_____
Size_____
Remarks_____

6. **Excessive Vegetative Growth** Type_____
G No evidence of excessive growth
G Vegetation in channels does not obstruct flow
G Location shown on site map Areal extent_____
Remarks_____

D. Cover Penetrations G Applicable G N/A

1. **Gas Vents** G Active G Passive
G Properly secured/locked G Functioning G Routinely sampled G Good condition
G Evidence of leakage at penetration G Needs O&M G N/A
Remarks 23 gas vents monitored quarterly

2. **Gas Monitoring Probes**
G Properly secured/locked G Functioning G Routinely sampled G Good condition
G Evidence of leakage at penetration G Needs O&M G N/A
Remarks 21 gas probes monitored quarterly

3. **Monitoring Wells** (within surface area of landfill)
G Properly secured/locked G Functioning G Routinely sampled G Good condition
G Evidence of leakage at penetration G Needs O&M G N/A
Remarks Wells are in good condition & locked

4. **Leachate Extraction Wells**
G Properly secured/locked G Functioning G Routinely sampled G Good condition
G Evidence of leakage at penetration G Needs O&M G N/A
Remarks_____

5. **Settlement Monuments** G Located G Routinely surveyed G N/A
Remarks_____

E. Gas Collection and Treatment G Applicable G N/A

1. **Gas Treatment Facilities**
G Flaring G Thermal destruction G Collection for reuse
G Good condition G Needs O&M
Remarks_____

2. **Gas Collection Wells, Manifolds and Piping**
G Good condition G Needs O&M
Remarks_____

3. **Gas Monitoring Facilities** (e.g., gas monitoring of adjacent homes or buildings)
G Good condition G Needs O&M G N/A
Remarks_____

F. Cover Drainage Layer G Applicable G N/A

1. **Outlet Pipes Inspected** G Functioning G N/A
Remarks_____

2. **Outlet Rock Inspected** G Functioning G N/A
Remarks_____

G. Detention/Sedimentation Ponds G Applicable G N/A

1. **Siltation** Areal extent_____ Depth_____ G N/A
G Siltation not evident
Remarks_____

2. **Erosion** Areal extent_____ Depth_____
G Erosion not evident
Remarks_____

3. **Outlet Works** G Functioning G N/A
Remarks Sedimentation basin + run off collection functioning properly.

4. **Dam** G Functioning G N/A
Remarks_____

H. Retaining Walls G Applicable G N/A

1. **Deformations** G Location shown on site map G Deformation not evident
   Horizontal displacement_____ Vertical displacement_____
   Rotational displacement_____
   Remarks_____

2. **Degradation** G Location shown on site map G Degradation not evident
   Remarks_____

I. Perimeter Ditches/Off-Site Discharge G Applicable G N/A

1. **Siltation** G Location shown on site map G Siltation not evident
   Areal extent_____ Depth_____
   Remarks_____

2. **Vegetative Growth** G Location shown on site map G N/A
   G Vegetation does not impede flow
   Areal extent_____ Type_____
   Remarks_____

3. **Erosion** G Location shown on site map G Erosion not evident
   Areal extent_____ Depth_____
   Remarks_____

4. **Discharge Structure** G Functioning G N/A
   Remarks_____

VIII. VERTICAL BARRIER WALLS G Applicable G N/A

1. **Settlement** G Location shown on site map G Settlement not evident
   Areal extent_____ Depth_____
   Remarks_____

2. **Performance Monitoring** Type of monitoring_____
   G Performance not monitored
   Frequency_____ G Evidence of breaching
   Head differential_____
   Remarks_____

IX. GROUNDWATER/SURFACE WATER REMEDIES	G Applicable	G N/A
A. Groundwater Extraction Wells, Pumps, and Pipelines	**G** Applicable	**G** N/A
1. **Pumps, Wellhead Plumbing, and Electrical** **G** Good condition **G** All required wells located **G** Needs O&M **G** N/A Remarks_____		
2. **Extraction System Pipelines, Valves, Valve Boxes, and Other Appurtenances** **G** Good condition **G** Needs O&M Remarks_____		
3. **Spare Parts and Equipment** **G** Readily available **G** Good condition **G** Requires upgrade **G** Needs to be provided Remarks_____		
B. Surface Water Collection Structures, Pumps, and Pipelines	**G** Applicable	**G** N/A
1. **Collection Structures, Pumps, and Electrical** **G** Good condition **G** Needs O&M Remarks_____		
2. **Surface Water Collection System Pipelines, Valves, Valve Boxes, and Other Appurtenances** **G** Good condition **G** Needs O&M Remarks_____		

3. **Spare Parts and Equipment**
G Readily available G Good condition G Requires upgrade G Needs to be provided
Remarks_____

C. Treatment System G Applicable G N/A

1. **Treatment Train** (Check components that apply)
G Metals removal G Oil/water separation G Bioremediation
G Air stripping G Carbon adsorbers
G Filters_____
G Additive (e.g., chelation agent, flocculent)_____
G Others_____
G Good condition G Needs O&M
G Sampling ports properly marked and functional
G Sampling/maintenance log displayed and up to date
G Equipment properly identified
G Quantity of groundwater treated annually_____
G Quantity of surface water treated annually_____
Remarks_____

2. **Electrical Enclosures and Panels** (properly rated and functional)
G N/A G Good condition G Needs O&M
Remarks_____

3. **Tanks, Vaults, Storage Vessels**
G N/A G Good condition G Proper secondary containment G Needs O&M
Remarks_____

4. **Discharge Structure and Appurtenances**
G N/A G Good condition G Needs O&M
Remarks_____

5. **Treatment Building(s)**
G N/A G Good condition (esp. roof and doorways) G Needs repair
G Chemicals and equipment properly stored
Remarks_____

6. **Monitoring Wells** (pump and treatment remedy)
G Properly secured/locked G Functioning G Routinely sampled G Good condition
G All required wells located G Needs O&M G N/A
Remarks_____

D. Monitored Natural Attenuation

1. **Monitoring Wells** (natural attenuation remedy)
   G Properly secured/locked G Functioning G Routinely sampled G Good condition
   G All required wells located G Needs O&M ~~G~~ N/A
   Remarks

X. OTHER REMEDIES

If there are remedies applied at the site which are not covered above, attach an inspection sheet describing the physical nature and condition of any facility associated with the remedy. An example would be soil vapor extraction.

XI. OVERALL OBSERVATIONS

A. Implementation of the Remedy

Describe issues and observations relating to whether the remedy is effective and functioning as designed. Begin with a brief statement of what the remedy is to accomplish (i.e., to contain contaminant plume, minimize infiltration and gas emission, etc.).

The goals of the remedy are to 1) prevent PCB migration from the landfill via erosion or surface water runoff into the Kalamazoo River and 2) prevent or eliminate exposure to PCB-contaminated material. The remedy is functioning as designed. The cap is an effective barrier that prevents on site workers, trespassers, or anglers from being exposed to contaminated material. The cap is in good condition & prevents contaminated material from migrating via erosion or surface water runoff into the Kalamazoo River. Public access is restricted by a locked chain link fence.

B. Adequacy of O&M

Describe issues and observations related to the implementation and scope of O&M procedures. In particular, discuss their relationship to the current and long-term protectiveness of the remedy.

O&M inspections are routinely conducted. Problems noted during inspections are quickly repaired and/or corrected. Thereby ensuring the current and long term protectiveness of the remedy. The remedy is functioning as intended and is protective.

C.	**Early Indicators of Potential Remedy Failure**
	Describe issues and observations such as unexpected changes in the cost or scope of O&M or a high frequency of unscheduled repairs, that suggest that the protectiveness of the remedy may be compromised in the future. O&M cost estimates not available at the time of the Site Inspection. However, the MDEQ project manager + PRPs indicate there were no unexpected changes in the scope of the O&M activities.
D.	**Opportunities for Optimization**
	Describe possible opportunities for optimization in monitoring tasks or the operation of the remedy. none.

Attachment 5

Phone Interview Record

INTERVIEW DOCUMENTATION FORM

The following is a list of individual interviewed for this five-year review. See the attached contact record(s) for a detailed summary of the interviews.

Name	Title/Position	Organization	Date
Steve Taplin	President, Terra Contracting O+M Contractor for King Highway Landfill		9/11/07

Attachment 5

Phone Interview Record

INTERVIEW RECORD

/Kalamazoo River

Site Name: Allied Paper/Portage Creek/		**EPA ID No.:** MID 006007306
Subject: King Highway Landfill OU3	**Time:** 2pm	**Date:** 9/11/07
Type: ☐ Telephone ☐ Visit ☐ Other **Location of Visit:**		☐ Incoming ☑ Outgoing

Contact Made By:

Name: Shari Kolak	**Title:** Remedial Project Manager	**Organization:** U.S. EPA, Superfund

Individual Contacted:

Name: Steve Taplin,	**Title:** O+M Contractor for OU3	**Organization:** Terra Contracting,
Telephone No.: **Fax No.:** **E-Mail Address:**	**Street Address:** **City, State, Zip:**	

Summary Of Conversation

There were no problems encountered during construction of the landfill remedy. Components of the remedy are inspected quarterly, at a minimum, as part of the post-closure operation and maintenance activities. The site is secured by a chain-link fence & there is no evidence of trespassers entering the site. On September 21, 2007 new warning signs were posted every 200 feet along the fence on the west side of the landfill, per U.S. EPA's request. There have been no concerns voiced by site neighbors. Overall, the remedy is operating properly. The only unusual situation that occurred during post-closure monitoring is the off-site migration of methane gas, which is being addressed with the MDEQ.

Attachment 6

Restrictive Covenant for OU4

ENVIRONMENTAL PROTECTION EASEMENT AND DECLARATION OF RESTRICTIVE COVENANT

MDEQ Reference No: RC-RRD-201-05-001
U.S. EPA Site No: 059B

This Environmental Protection Easement and Declaration of Restrictive Covenant is made by and between **Plainwell Inc.**, a Delaware, Corporation, ("Grantor"); the **Michigan Department of Environmental Quality** ("MDEQ" or "Grantee"), having an address c/o Director, Michigan Department of Environmental Quality, P.O. Box 30473, Lansing, Michigan 48909-7973; and the **United States of America** and its assigns ("Third Party Beneficiary"), having an address c/o the United States Environmental Protection Agency ("U.S. EPA"), Attn: Director, Superfund Division, Region 5, 77 W. Jackson Blvd. SR-6J, Chicago, Illinois 60604.

This Environmental Protection Easement and Declaration of Restrictive Covenant has been recorded with the Allegan County Register of Deeds for the purpose of protecting public health, safety and welfare, and the environment by: (1) granting a right of access to the U.S. EPA and the MDEQ and their authorized representatives to monitor and conduct Response Activities, as that term is defined below; and (2) prohibiting or restricting activities that could result in unacceptable exposure to environmental contamination present at the Plainwell mill property, as legally described in Exhibit 1 attached hereto ("Mill Property").

The Mill Property is part of the Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site (the "Site"). The Site was placed on the National Priorities List ("NPL") on August 30, 1990, and is a facility, as that term is defined in Section 101(9) of the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. § 9601 *et seq.* ("CERCLA") and Section 20101(0) of Part 201, Environmental Remediation, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, MCL 324.20101(0) *et seq.* ("NREPA"). The Mill Property has been subject to Response Activities pursuant to the NREPA, in a manner consistent with CERCLA, for environmental contamination related to the Site. Response Activities at the Mill Property are the subject of a Consent Decree entered into by the United States and Weyerhaeuser Company, which was lodged with the District Court of Delaware on January 3, 2005, a copy of which is attached hereto as Exhibit 2 (the "Consent Decree"). Information pertaining to the environmental conditions at the Mill Property and Response Activities undertaken at the Site is on file with U.S. EPA and the MDEQ, Remediation and Redevelopment Division.

Mollhuey + K...

The restrictions contained in this Restrictive Covenant are based upon information available to U.S. EPA and the MDEQ at the date this instrument is recorded. The discovery of environmental conditions at the Mill Property unknown as of the recording date of this instrument, or use of the Mill Property in a manner inconsistent with the restrictions described herein, may result in this Restrictive Covenant not being protective of public health, safety, and welfare, and the environment.

Property Identification Number: See Exhibit 3 attached

Exhibit 1 provides a legal description and survey of the Mill Property that is subject to the land use or resource use restrictions specified herein.

Summary of Response Activities

The Mill Property was historically used to manufacture and recycle paper. In 1997, Plainwell Inc. conducted a Phase I Environmental Assessment and Phase II Investigation for the Mill Property. Based on the results of the Phase I and Phase II investigations, as well as other information regarding the Mill Property, U.S. EPA and MDEQ concluded that Response Activities should be performed to ensure the protection of human health and the environment. Pursuant to the Consent Decree, Weyerhaeuser will perform a Remedial Investigation/Feasibility Study regarding the nature and extent of hazardous contamination at the Mill Property, and will perform the remedial action to be selected by U.S. EPA in a Record of Decision ("ROD") for the Mill Property.

Definitions

"MDEQ" means the Michigan Department of Environmental Quality, its successor entities, if any, and those authorized persons or entities acting on its behalf.

"Owner" means, at any given time, the then current title holder of the Mill Property, or any portion thereof.

"Owners Subsequent to Plainwell" means, at any given time, the then current title holder of the Mill Property or any portion thereof, except for Plainwell Inc.

"Plainwell" shall mean Plainwell Inc., the owner of the Mill Property as of the date of the execution of this Environmental Protection Easement and Declaration of Restrictive Covenant, and the Owner for as long as Plainwell Inc. is a current title holder of the Mill Property or any portion thereof.

"Response Activities" shall mean, consistent with Section 101(25) of CERCLA, such actions as have been or may be necessary to conduct any removal, remedy or remedial action, as those terms are defined in Sections 101(23) and 101(24) of CERCLA, at the Mill Property and/or at the Site, including enforcement activities related thereto.

"U.S. EPA" shall mean the United States Environmental Protection Agency, its successor entities and those persons or entities acting on its behalf.

All other terms used in this document which are defined in Part 3, Definitions, of the NREPA; Part 201 of the NREPA; or the Part 201 Administrative Rules ("Part 201 Rules"), 1990 AACS R 299.5101 *et seq.*, shall have the same meaning in this document as in Parts 3 and 201 of the NREPA and the Part 201 Rules, as of the recording date of this instrument.

NOW THEREFORE,

Grantor, on behalf of itself, its successors and assigns, in consideration of the terms of the Settlement Agreement in the jointly administered cases in the United States District Court for the District of Delaware: In Re: Plainwell, Inc., et al., Case No. 00-4350 (JWV), and Weyerhaeuser v. Plainwell, Inc. and Plainwell Holding Company, Case No. 04-CV-16 (KAJ), covenants and declares that the Mill Property shall be subject to the restrictions on use set forth below, and conveys and warrants to the Grantee, and its assigns and to the United States of America, and its assigns, as Third Party Beneficiary: 1) an environmental protection easement, the nature, character, and purposes for which are set forth herein; and 2) the right to enforce said use restrictions.

Environmental Protection Easement

1. **Access**. Grantor grants to Grantee, and its assigns, and to the United States of America, and its assigns, as Third Party Beneficiary, an irrevocable and continuing right of access at all reasonable times to the Mill Property for purposes of:

a) Conducting and/or monitoring investigations relating to the nature and extent of contamination on or near the Mill Property and/or the Kalamazoo River Operable Unit of the Site including, without limitation, sampling of air, water, sediments, soils, and specifically, without limitation, obtaining split or duplicate samples;

b) Monitoring and/or implementing the Response Activities to be selected in a ROD for the Mill Property and/or the Kalamazoo River Operable Unit of the Site;

c) Verifying any data or information submitted to U.S. EPA and/or the MDEQ and determining and monitoring compliance with the Consent Decree, any ROD relating to Mill Property and/or the Site and any implementing statement of work;

d) Verifying that no action is being taken on the Mill Property in violation of the terms of this instrument, or in violation of any federal or state environmental laws or regulations applicable to any Response Activities at the Mill Property or at the Site;

e) Conducting periodic reviews of Response Activities at the Mill Property and at the Site, including but not limited to, reviews required by applicable statutes and/or regulations;

f) implementing additional or new Response Activities, as that term is defined above, if the remedial action selected in the ROD for the Mill Property and/or the Kalamazoo River Operable Unit results in any hazardous substances, pollutants or contaminants remaining at the Site above levels that allow for unlimited use and unrestricted exposure, and U.S. EPA, in consultation with MDEQ and pursuant to Section 121(c) of CERCLA, determines that, upon its completion, the selected remedy for the Mill Property or the

Kalamazoo River OU will not be protective of public health, welfare or the environment; or

g) implementing additional or new response activities, as that term is defined in Section 20101(1)(ee) of the NREPA, if the remedial action selected in the ROD for the Mill Property and/or the Kalamazoo River Operable Unit results in any hazardous substances, pollutants or contaminants remaining at the Site above the criteria developed pursuant to Section 20120a(1)(a) of the NREPA, and MDEQ, in consultation with U.S. EPA, determines that, upon its completion, the selected remedy will not be protective of the public health, safety, or welfare, or the environment.

Nothing in this instrument shall limit or otherwise affect U.S. EPA's or the MDEQ's right of entry and access, or authorities to take Response Activities as defined in this instrument, as well as in Section 20101(1)(ee) Part 201 of the NREPA, under CERCLA, the National Contingency Plan, 40 C.F.R. Part 300, the NREPA, and any successor statutory provisions, or other state or federal law.

Declaration of Land Use or Resource Use Restrictions

2. Owners Subsequent to Plainwell shall comply with the applicable due care requirements of Section 20107a of the NREPA and Part 10 of the Part 201 Administrative Rules. Owners Subsequent to Plainwell shall exercise due care with respect to any hazardous substance at the Mill Property and, pursuant to CERCLA, will take reasonable steps to stop any continuing release of a hazardous substance; prevent any threatened future release; and prevent or limit human, environmental or natural resource exposure to any previously released hazardous substance.

3. Owners Subsequent to Plainwell shall not use the Mill Property in a manner that causes existing contamination to migrate beyond the boundaries of the Mill Property, increases the cost of Response Activities, or otherwise exacerbates the existing contamination located on the Mill Property. The term exacerbation is more specifically defined in Section 20101(1)(n) of the NREPA.

4. As Response Activities are performed at the Mill Property and at the Site, the MDEQ and U.S. EPA may require modifications to the restrictions contained in this Environmental Protection Easement and Declaration of Restrictive Covenant to implement necessary Response Activities at the Mill Property or the Site, or to assure the integrity and effectiveness of the remedial action to be selected for the Mill Property and/or the Kalamazoo River Operable Unit of the Site.

5. The Owner shall restrict activities at the Mill Property that may interfere with Response Activities at the Mill Property or the Site, including interim response, remedial action, operation and maintenance, monitoring, or other measures necessary to assure the effectiveness and integrity of the remedial action.

Term, Modification and Enforcement of Environmental Protection Easement and Declaration of Restrictive Covenant

6. This Environmental Protection Easement and Declaration of Restrictive Covenant shall run with land and be binding on the Grantor, its successors and assigns, including all lessees, easement holders, their assigns, and their authorized agents, employees, or persons acting under their direction and control. This Environmental Protection Easement and Declaration of Restrictive Covenant will expire upon the earlier of: (1) notice in the Federal Register announcing deletion of the Site from the NPL because U.S. EPA and the State of Michigan have determined that the Site poses no threat to human health, welfare or the environment, and therefore no additional Response Activities, as that term is defined in this instrument or in Section 20101(1)(ee) of the NREPA, are necessary; or (2) recision of the instrument upon written approval of U.S. EPA and MDEQ pursuant to Paragraph 7, below.

7. The Owner may request in writing to U.S. EPA and the MDEQ, at the address given below, modifications to or recision of this instrument. This instrument may be modified or rescinded only with the written approval of U.S. EPA and the MDEQ. Any modification to or recision of this Environmental Protection Easement and Declaration of Restrictive Covenant shall be filed with the appropriate Registrar of Deeds by the then Owner and a certified copy shall be returned to the MDEQ and U.S. EPA at the addresses listed above.

8. The State of Michigan, through the MDEQ, the Owner, and the United States on behalf of U.S. EPA, as a Third Party Beneficiary, may enforce the easement and restrictions set forth in this Environmental Protection Easement and Declaration of Restrictive Covenant by legal action in a court of competent jurisdiction.

9. **Severability.** If any provision of this Environmental Protection Easement and Declaration of Restrictive Covenant is held to be invalid by any court of competent jurisdiction, the invalidity of such provision shall not affect the validity of any other provision hereof, and all other such provisions shall continue unimpaired and in full force and effect.

10. **Transfer of Interest:** The Owner shall provide notice to the MDEQ and U.S. EPA of the Owner's intent to transfer any interest in the Mill Property, or any portion thereof, fourteen (14) days prior to consummating the conveyance. A conveyance of title, easement, or other interest in the Mill Property shall not be consummated by the Owner unless the Owner complies with the applicable provisions of Section 20116 of the NREPA. The Owner shall include in any instrument conveying any interest in any portion of the Mill Property, including but not limited to deeds, leases and mortgages, a notice which is in substantially the following form:

> **NOTICE: THE INTEREST CONVEYED HEREBY IS SUBJECT TO A DECLARATION OF ENVIRONMENTAL PROTECTION EASEMENT AND DECLARATION OF RESTRICTIVE COVENANT, DATED _____, 200_ RECORDED WITH THE ALLEGAN COUNTY REGISTER OF DEEDS, LIBER____, PAGE ___,**

11. **Notices:** Any notice, demand, request, consent, approval, or communication that is required to be made or obtained under this instrument shall be made in writing and include a statement that the notice is being made pursuant to the requirements of this Environmental Protection Easement and Declaration of Restrictive Covenant, MDEQ Reference Number RC-RRD-201-05-001, and U.S. EPA Site No. 059B, and shall be served either personally or sent via first class mail, postage prepaid, as follows:

For U.S. EPA: Director

Superfund Division
U.S. EPA Region 5
77 W. Jackson Blvd. SR-6J
Chicago, Illinois 60604

With a copy to: Eileen L. Furey
Associate Regional Counsel
U.S. EPA Region 5
77 W. Jackson Blvd. C-14J
Chicago, Illinois 60604

For the MDEQ: Director
Michigan Department of Environmental Quality
P.O. Box 30473
Lansing, Michigan 48909-7973

With a copy to: Suzanne D. Sonneborn
Assistant Attorney General
Environment, Natural Resources, and Agriculture Division
Michigan Department of Attorney General
525 W. Ottawa St.
Lansing, Michigan 48933

12. **Authority to Execute Environmental Protection Easement and Declaration of Restrictive Covenant.** The undersigned person executing this Environmental Protection Easement and Declaration of Restrictive Covenant is the Owner and represents and certifies that he or she is duly authorized and has been empowered to execute and deliver this Instrument.

IN WITNESS WHEREOF, Plainwell Inc. has caused this Environmental Protection Easement and Declaration of Restrictive Covenant to be executed on this 16 day of March, 2005.

PLAINWELL INC.

By: _____
Name: Jeff Arnesen
Its: SVP -Chief Financial Officer

STATE OF MINNESOTA
COUNTY OF HENNEPIN

Personally came before me this 16 day of March, 2005, the above-named Jeff Arnesen as Chief Financial Officer of Plainwell, Inc., to me known to be the person who executed the foregoing instrument and acknowledged the same.

Renee Arleen Weiss
Notary Public

Renee Arleen Weiss
[Print or type name]
Commissioned in County Hennepin
My Commission Expires: Jan 31. 2010

This instrument was prepared by
and after recording, should be returned to:

Pamela E. Barker
Godfrey & Kahn, S.C.
780 North Water Street
Milwaukee, WI 53202

EXHIBIT 1
LEGAL DESCRIPTION OF THE PLAINWELL MILL PROPERTY

P.P. 0355-020-001-10

PARCEL B-l: COMMENCING NORTH 58 DEGREES 23' WEST 171.82 RODS FROM THE EAST QUARTER POST OF SECTION 30; THENCE NORTH 31 DEGREES 37' EAST 640 FEET; THENCE NORTH 58 DEGREES 23' WEST 150 FEET; THENCE SOUTH 31 DEGREES 37' WEST 475 FEET; THENCE SOUTH 58 DEGREES 23' EAST 66 FEET; THENCE SOUTH 31 DEGREES 37' WEST 165 FEET TO CENTER OF HIGHWAY; THENCE SOUTH 58 DEGREES 23' EAST 84 FEET TO THE PLACE OF BEGINNING.

P.P. 0355-030-077-00

PARCEL B-2: COMMENCING AT A POINT NORTH 58 DEGREES 23' WEST 176.91 RODS FROM THE EAST 1/4 POST OF SECTION 30, TOWN 1 NORTH, RANGE 11 WEST; THENCE NORTH 31 DEGREES 37' EAST 165 FEET; THENCE NORTH 58 DEGREES 23' WEST 66 FEET; THENCE SOUTH 31 DEGREES 37' WEST 165 FEET; THENCE SOUTH 58 DEGREES 23' EAST 66 FEET TO THE PLACE OF BEGINNING.

P.P. 0355-030-077-10

PARCEL C-l: COMMENCING AT A POINT NORTH 58 DEGREES 23' WEST, 180.91 RODS FROM T~LE EAST 1/4 POST OF SECTION 30, TOWN 1 NORTH, RANGE 11 WEST THENCE NORTH 31 DEGREES 37' EAST 640 FEET; THENCE NORTH 58 DEGREES 23' WEST 312.4 FEET; THENCE SOUTH 28 DEGREES 17' WEST 641.3 FEET TO CENTER OF HIGHWAY; THENCE SOUTH 58 DEGREES 23' EAST 275 FEET TO SAID POINT OF BEGINNING, EXCEPTING AND RESERVING A STRIP OF LAND 183.3 FEET WIDE OFF THE WESTERLY SIDE THEREOF.

P.P. 0355-030-077-20

PARCEL C-2: PART OF THE NORTH 1/2 OF SECTION 30, TOWN 1 NORTH, RANGE ll WEST, DESCRIBED AS FOLLOWS: THE EAST 91 2/3 FEET OF THE WEST 183 1/3 FEET OF THE FOLLOWING DESCRIBED PREMISES; COMMENCING AT A POINT NORTH 58 DEGREES 23' WEST 180.91 RODS FROM THE EAST I/4 POST OF SECTION 30, TOWN 1 NORTH, RANGE 11 WEST; THENCE NORTH 31 DEGREES 37' EAST 640.0 FEET; THENCE NORTH 58 DEGREES 23' WEST 312.4 FEET; THENCE SOUTH 28 DEGREES 17' WEST 641.3 FEET TO CENTER OF HIGHWAY; THENCE SOUTH 58 DEGREES 23' EAST 275 FEET TO SAID POINT OF BEGINNING.

P.P. 0355-030-077-30

PARCEL D: COMMENCING AT THE SOUTHWEST CORNER OF LOT 4, LASHER'S ADDITION TO THE VILLAGE (NOW CITY) OF PLAINWELL; THENCE WESTERLY ALONG THE NORTH LINE OF WEST ALLEGAN STREET 165 FEET; THENCE NORTHERLY 462 FEET; THENCE EASTERLY 165 FEET TO THE WEST LINE OF LASHER'S ADDITION; THENCE SOUTHERLY TO THE PLACE OF BEGINNING, BEING IN THE NORTHEAST 1/4 OF SECTION 30, TOWN 1 NORTH RANGE 11 WEST.

P.P. 0355-030-080-00

PARCELS 1, 2 AND 3: LOT 43 TO 48, INCLUSIVE, CORPORATION PLAT AND LOT 75, CORPORATION PLAT, EXCEPT THAT PART LYING WEST OF LOT 27 NORTHEASTERLY OF THE MILL RACE AND LOT 120, CORPORATION PLAT. ALSO LOTS 1-12 AND LOTS 49-59, WHITNEY ADDITION. ALSO LOTS 1-16 LASHERS ADDITION.

P.P. 0355-160-043-00

PARCEL 4: VACATED RIVER STREET LOCATED IN RIVERVIEW ADDITION, ALSO THAT PART OF MICHIGAN AVENUE, VACATED, LYING BETWEEN THE SOUTHERLY SIDE OF RIVER STREET AND NORTHERLY OF A LINE CONNECTING THE SOUTHERLY SIDE OF LOT 25, BLOCK 1, AND SOUTHERLY SIDE OF LOT 21, BLOCK 2, RIVERVIEW ADDITION, ALSO THAT PART OF PROSPECT AVENUE, VACATED, LYING BETWEEN THE SOUTHERLY SIDE OF RIVER STREET AND NORTHERLY OF SOUTHERLY EXTENSION OF SOUTHERLY LINE OF LOT 40, BLOCK I, RIVERVIEW ADDITION, ALSO LOTS 25 THRU 40, BLOCK 1, ALSO LOTS 16 THRU 30, BLOCK 2, RIVERVIEW ADDITION.

P.P. 0355-280-013-00

PARCEL 5: COMMENCING AT THE SOUTHWEST CORNER OF LOT 25, BLOCK 2, RIVERVIEW ADDITION; THENCE NORTHWESTERLY PARALLEL WITH ALLEGAN STREET 463 FEET; THENCE NORTH 31 DEGREES 32' EAST TO THE LEFT BANK OF KALAMAZOO RIVER; THENCE SOUTHERLY ON SAID RIVER BANK TO THE NORTHWEST CORNER OF RIVERVIEW ADDITION; THENCE SOUTH 31 DEGREES 37' WEST ALONG THE WEST LINE OF SAID ADDITION, 189 FEET TO POINT OF BEGINNING, SECTION 30, TOWN 1 NORTH, RANGE 11 WEST.

P.P. 0355-030-076-00

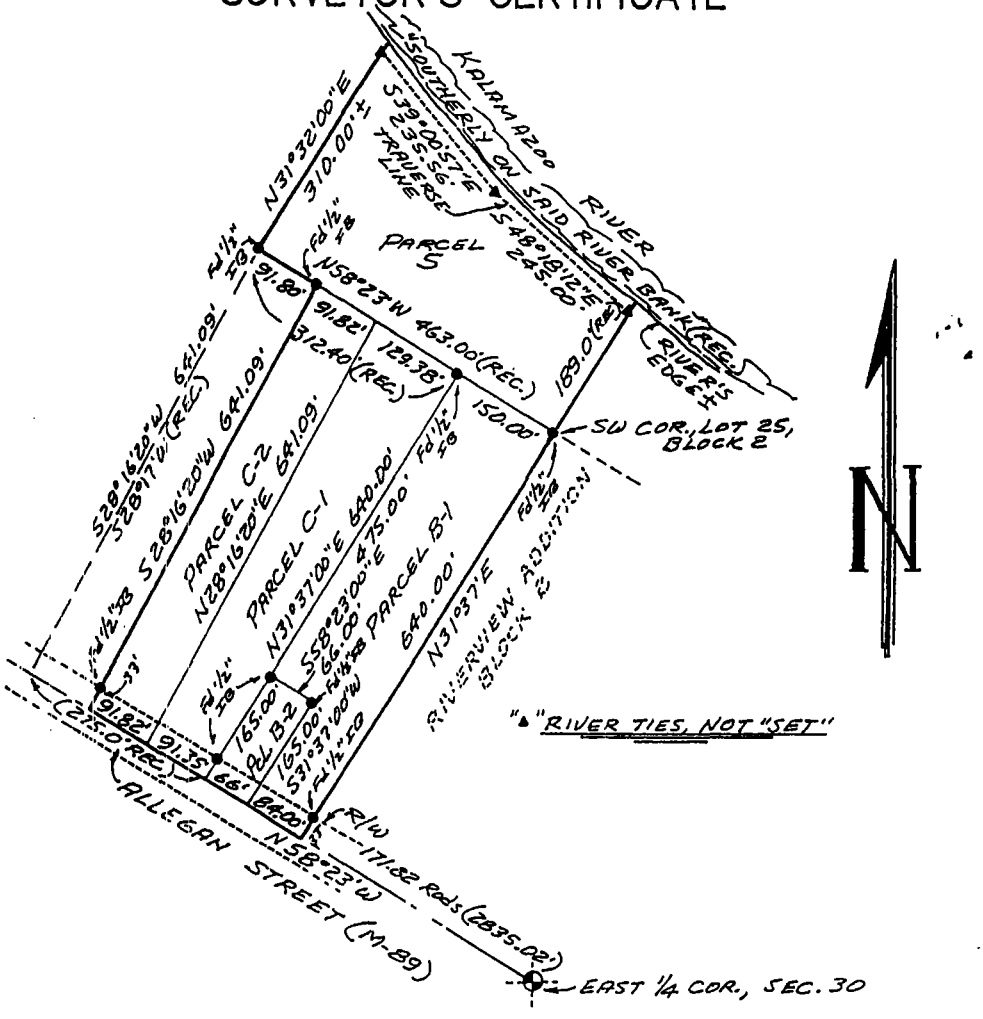
PARCEL 7: COMMENCING ON THE WEST LINE OF LASHER'S ADDITION *495* FEET ON SAID ADDITION LINE FROM THE CENTER LINE OF ALLEGAN STREET; THENCE NORTH 58 DEGREES 23' WEST 231 FEET; THENCE SOUTH 31 DEGREES 37' WEST 57.25 FEET; THENCE NORTH 58 DEGREES 23' WEST 99 FEET TO THE EAST LINE OF RIVERVIEW ADDITION: THENCE NORTH 31 DEGREES 37' EAST TO LEFT BANK OF THE KALAMAZOO RIVER; THENCE SOUTHEASTERLY ON SAID RIVER BANK TO THE NORTHWEST CORNER OF LOT 16, LASHER'S ADDITION; THENCE SOUTHWESTERLY TO BEGINNING. SECTION 30, TOWN 1 NORTH, RANGE 11 WEST.

PARCEL 7 WAS FORMERLY DESCRIBED AS COMMENCING AT THE SOUTHWEST CORNER OF LOT 16 OF LASHER'S ADDITION TO THE VILLAGE (NOW CITY) OF PLAINWELL, MICHIGAN, ACCORDING TO THE PLAT THEREOF OF RECORD AND ON

FILE IN THE OFFICE OF THE REGISTER OF DEEDS FOR SAID COUNTY, SAID POINT BEING 462 FEET NORTHERLY OF THE NORTH LINE OF ALLEGAN STREET;

THENCE WESTERLY 226.4 FEET TO A POINT 495 FEET NORTHERLY OF THE NORTH LINE OF ALLEGAN STREET, MEASURED ALONG A LINE PARALLEL WITH THE EAST LINE OF PROSPECT AVENUE, AS SHOWN ON THE PLAT OF RIVERVIEW ADDITION, ACCORDING TO THE PLAT THEREOF OF RECORD AND ON FILE IN THE OFFICE OF THE REGISTER OF DEEDS FOR SAID COUNTY; THENCE SOUTHERLY PARALLEL WITH THE EAST LINE OF PROSPECT AVENUE AS SHOWN ON THE PLAT OF SAID RIVERVIEW ADDITION, TO A POLNT 437.25 FEET NORTHERLY OF THE NORTH LINE OF SAID ALLEGAN STREET, MEASURED ALONG A LINE PARALLEL WITH THE EAST LINE OF SAID PROSPECT AVENUE; THENCE WESTERLY 99 FEET TO A POINT 437.25 FEET NORTHERLY, AS MEASURED ALONG THE EASTERLY LINE OF SAID PROSPECT AVENUE, OF THE NORTH LINE OF ALLEGAN STREET AND ON THE EAST LINE OF SAID PROSPECT AVENUE; THENCE NORTHERLY ON THE EASTERLY LINE OF SAID PROSPECT AVENUE AND THE NORTHERLY EXTENSION THEREOF TO THE KALAMAZOO RIVER; THENCE SOUTHEASTERLY ALONG SAID RIVER TO THE NORTHWEST CORNER OF LOT 16 OF SAID LASHER'S ADDITION; THENCE ALONG THE WEST LINE OF SAID LOT 16 TO THE PLACE OF BEGINNING.

SURVEYOR'S CERTIFICATE



PARCEL B-1
COMMENCING NORTH 58°-23' WEST 171.82 RODS (2835.03 FEET) FROM THE EAST QUARTER POST OF SECTION 30; THENCE NORTH 31°-37' EAST 640 FEET; THENCE NORTH 58°-23' WEST 150 FEET; THENCE SOUTH 31°-37' WEST 475 FEET; THENCE SOUTH 58°-23' EAST 66 FEET; THENCE SOUTH 31°-37' WEST 165 FEET TO CENTER OF HIGHWAY; THENCE SOUTH 58°-23' EAST 84 FEET TO THE PLACE OF BEGINNING, CITY OF PLAINWELL.

PARCEL B-2
COMMENCING AT A POINT NORTH 58°-23' WEST 176.91 (2919.02 FEET) RODS FROM THE EAST 1/4 POST OF SECTION 30, TOWN 1 NORTH, RANGE 11 WEST; THENCE NORTH 31°-37' EAST 165 FEET; THENCE NORTH 58°-23' WEST 66 FEET; THENCE SOUTH 31°-37' WEST 165 FEET; THENCE SOUTH 58°-23' EAST 66 FEET TO THE PLACE OF BEGINNING.

LEGEND:
- O – 1/2" IRON SET
- ● – CORNER FOUND
- R – "RECORDED AS"

0' 100' 200' 400'

BEARING SOURCE: PRIOR CONVEYANCES

LOCATION: NORTH 1/2, SECTION 30, T 1N – R 11W, CITY OF PLAINWELL TWP., ALLEGAN CO., MICHIGAN.

CERTIFIED TO: SIMPSON PLAINWELL PAPER CO.

I HEREBY CERTIFY THAT I HAVE SURVEYED AND MAPPED THE LAND ABOVE PLATTED AND/OR DESCRIBED ON THIS DATE, AND THAT THE RATIO OF CLOSURE ON THE UNADJUSTED FIELD OBSERVATIONS WAS 10,000'+, AND THAT ALL OF THE REQUIREMENTS OF P.A. 132, 1970 HAVE BEEN COMPLIED WITH.

BY: Beryl M. Jones DATE: 10-18-96

BERYL M. JONES, PLS MI# 23514 DISK#50 "96306W"

STATE OF MICHIGAN
Beryl M. Jones
SURVEYOR
No. 23514
LICENSED LAND SURVEYOR

WIGHTMAN MOORED, INC.
Land Surveying and Consulting Engineering
114 CHESTNUT ST. ALLEGAN, MI 49010
(616) 673-8465 FAX 673-8464

PARCEL C-1
COMMENCING AT A POINT NORTH 58°-23' WEST, 180.91 RODS (2985.02 FEET) FROM THE EAST 1/4 POST OF SECTION 30, TOWN 1 NORTH, RANGE 11 WEST; THENCE NORTH 31°-37' EAST 640 FEET; THENCE NORTH 58°-23' WEST 312.4 FEET; THENCE SOUTH 28°-17' WEST 641.3 FEET TO CENTER OF HIGHWAY; THENCE SOUTH 58°-23' EAST 275 FEET TO SAID POINT OF BEGINNING. EXCEPTING AND RESERVING A STRIP OF LAND 183.3 FEET WIDE OFF THE WESTERLY SIDE THEREOF.

PARCEL C-2
PART OF THE NORTH 1/2 OF SECTION 30, TOWN 1 NORTH, RANGE 11 WEST, DESCRIBED AS FOLLOWS: THE EAST 91 2/3 FEET (91.66 FEET) OF THE WEST 183 1/3 FEET (183.33 FEET) OF THE FOLLOWING DESCRIBED PREMISES; COMMENCING AT A POINT NORTH 58°-23' WEST 180.91 RODS FROM THE EAST 1/4 POST OF SECTION 10, TOWN 1 NORTH, RANGE 11 WEST; THENCE NORTH 31°-37' EAST 640.0 FEET; THENCE NORTH 58°-23' WEST 312.4 FEET; THENCE SOUTH 28°-17' WEST 641.3 FEET TO CENTER OF HIGHWAY; THENCE SOUTH 58°-23' EAST 275 FEET TO SAID POINT OF BEGINNING.

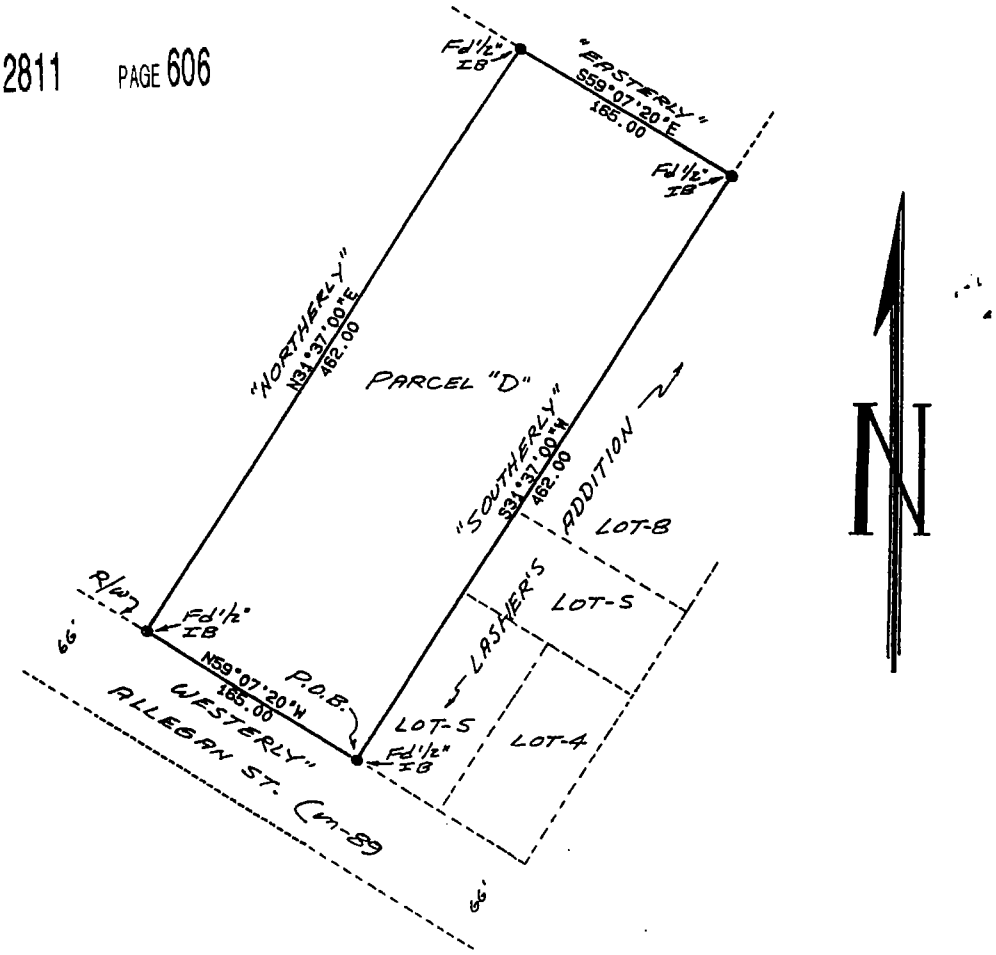
PARCEL 5
COMMENCING AT THE SOUTHWEST CORNER OF LOT 25, BLOCK 2, RIVERVIEW ADDITION; THENCE NORTHWESTERLY PARALLEL WITH ALLEGAN STREET 463 FEET; THENCE NORTH 31°-32' EAST TO THE LEFT BANK OF KALAMAZOO RIVER; THENCE SOUTHERLY ON SAID RIVER BANK TO THE NORTHWEST CORNER OF RIVERVIEW ADDITION; THENCE SOUTH 31°-37" WEST ALONG THE WEST LINE OF SAID ADDITION, 189 FEET TO POINT OF BEGINNING. SECTION 30, TOWN 1 NORTH, RANGE 11 WEST.

DISK#50"963064"

WIGHTMAN MOORED, INC.
Land Surveying and Consulting Engineering
114 CHESTNUT ST. ALLEGAN, MI 49010
(616) 673-8485 FAX 673-8484

SURVEYOR'S CERTIFICATE

LIBER 2811 PAGE 606



PARCEL D
COMMENCING AT THE SOUTHWEST CORNER OF LOT 4, LASHER'S ADDITION TO THE VILLAGE (NOW CITY) OF PLAINWELL; THENCE WESTERLY ALONG THE NORTH LINE OF WEST ALLEGAN STREET 165 FEET; THENCE NORTHERLY 462 FEET; THENCE EASTERLY 165 FEET TO THE WEST LINE OF LASHER'S ADDITION; THENCE SOUTHERLY TO THE PLACE OF BEGINNING, BEING IN THE NORTHWEST 1/4 OF SECTION 30, TOWN 1 NORTH, RANGE 11 WEST.

LEGEND:
- O – 1/2" IRON SET
- ● – CORNER FOUND
- R – "RECORDED AS"

0' 50' 100' 200'

BEARING SOURCE: LASHER'S ADDITION

LOCATION: NORTH 1/2, SECTION 30, T 1N-R 11W, CITY OF PLAINWELL/TWP., ALLEGAN CO., MICHIGAN.

CERTIFIED TO: SIMPSON PLAINWELL PAPER CO.

I HEREBY CERTIFY THAT I HAVE SURVEYED AND MAPPED THE LAND ABOVE PLATTED AND/OR DESCRIBED ON THIS DATE, AND THAT THE RATIO OF CLOSURE ON THE UNADJUSTED FIELD OBSERVATIONS WAS 10,000'+, AND THAT ALL OF THE REQUIREMENTS OF P.A. 132, 1970 HAVE BEEN COMPLIED WITH.

BY: Beryl M. Jones DATE: 10/18/96

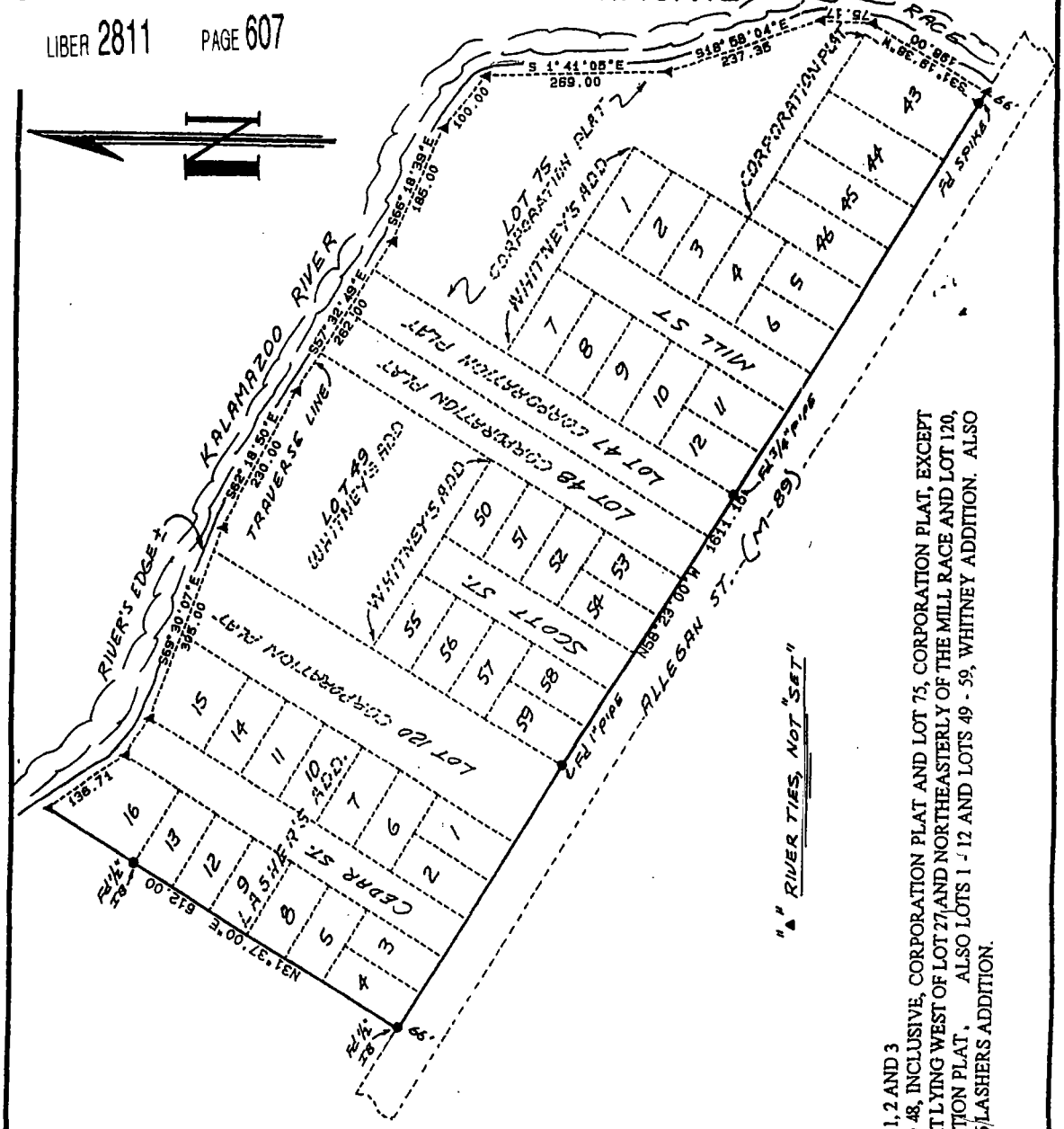
BERYL M. JONES, PLS MI# 23514 DISK# SO196306WD

STATE OF MICHIGAN
Beryl M. Jones
SURVEYOR
No. 23514
LICENSED LAND SURVEYOR

WIGHTMAN MOORED, INC.
Land Surveying and Consulting Engineering
114 CHESTNUT ST. ALLEGAN, MI 49010
(616) 673-8468 FAX 673-8464

SURVEYOR'S CERTIFICATE

LIBER 2811 PAGE 607



PARCEL'S 1, 2 AND 3
LOT 43 TO 48, INCLUSIVE, CORPORATION PLAT AND LOT 75, CORPORATION PLAT, EXCEPT THAT PART LYING WEST OF LOT 27 AND NORTHEASTERLY OF THE MILL RACE AND LOT 120, CORPORATION PLAT, ALSO LOTS 1 - 12 AND LOTS 49 - 59, WHITNEY ADDITION. ALSO LOTS 1 - 16 LASHERS ADDITION.

LEGEND:
- O – 1/2" IRON SET
- ● – CORNER FOUND
- R – "RECORDED AS"

0' 100' 200' 400'

BEARING SOURCE: LASHER'S ADDITION

LOCATION: NORTH 1/2, SECTION 30, T 1N – R 11W, CITY OF PLAINWELL TWP., ALLEGAN CO., MICHIGAN.

CERTIFIED TO: SIMPSON PLAINWELL PAPER CO.

I HEREBY CERTIFY THAT I HAVE SURVEYED AND MAPPED THE LAND ABOVE PLATTED AND/OR DESCRIBED ON THIS DATE, AND THAT THE RATIO OF CLOSURE ON THE UNADJUSTED FIELD OBSERVATIONS WAS 10,000'+, AND THAT ALL OF THE REQUIREMENTS OF P.A. 132, 1970 HAVE BEEN COMPLIED WITH.

BY: Beryl M. Jones DATE: 10/18/96

BERYL M. JONES, PLS MI# 23514

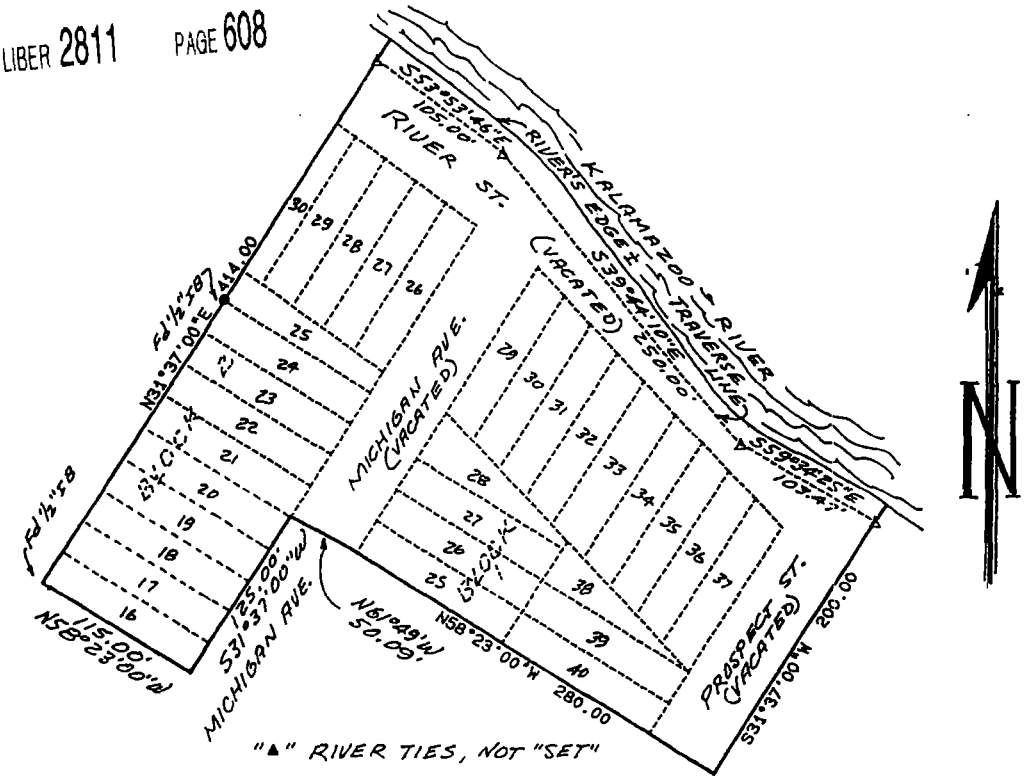
DISK#50 "963060"

STATE OF MICHIGAN
Beryl M. Jones
SURVEYOR
No. 23514
LICENSED LAND SURVEYOR

WIGHTMAN MOORED, INC.
Land Surveying and Consulting Engineering
114 CHESTNUT ST. ALLEGAN, MI 49010
(616) 673-8486 FAX 673-5484

SURVEYOR'S CERTIFICATE

LIBER 2811 PAGE 608



PARCEL 4
VACATED RIVER STREET LOCATED IN RIVERVIEW ADDITION, ALSO THAT PART OF MICHIGAN AVENUE, VACATED, LYING BETWEEN THE SOUTHERLY SIDE OF RIVER STREET AND NORTHERLY OF A LINE CONNECTING THE SOUTHERLY SIDE OF LOTS 25, BLOCK 1, AND SOUTHERLY SIDE OF LOT 21, BLOCK 2, RIVERVIEW ADDITION, ALSO THAT PART OF PROSPECT AVENUE, VACATED, LYING BETWEEN THE SOUTHERLY SIDE OF RIVER STREET AND NORTHERLY OF SOUTHERLY EXTENSION OF SOUTHERLY LINE OF LOT 40, BLOCK 1, RIVERVIEW ADDITION, ALSO LOTS 25 THRU 40, BLOCK 1, ALSO LOTS 16 THRU 30, BLOCK 2, RIVERVIEW ADDITION.

LEGEND:
O – 1/2" IRON SET
● – CORNER FOUND
R – "RECORDED AS"

0' 50' 100' 200'

BEARING SOURCE: RIVERVIEW ADDITION

LOCATION: NORTH 1/2, SECTION 30, T 1N -R 11W, CITY OF PLAINWELL TWP., ALLEGAN CO., MICHIGAN.

CERTIFIED TO: SIMPSON PLAINWELL PAPER CO.

I HEREBY CERTIFY THAT I HAVE SURVEYED AND MAPPED THE LAND ABOVE PLATTED AND/OR DESCRIBED ON THIS DATE, AND THAT THE RATIO OF CLOSURE ON THE UNADJUSTED FIELD OBSERVATIONS WAS 10,000'+ AND THAT ALL OF THE REQUIREMENTS OF P.A. 132, 1970 HAVE BEEN COMPLIED WITH.

BY: Beryl M. Jones DATE: 10/18/96

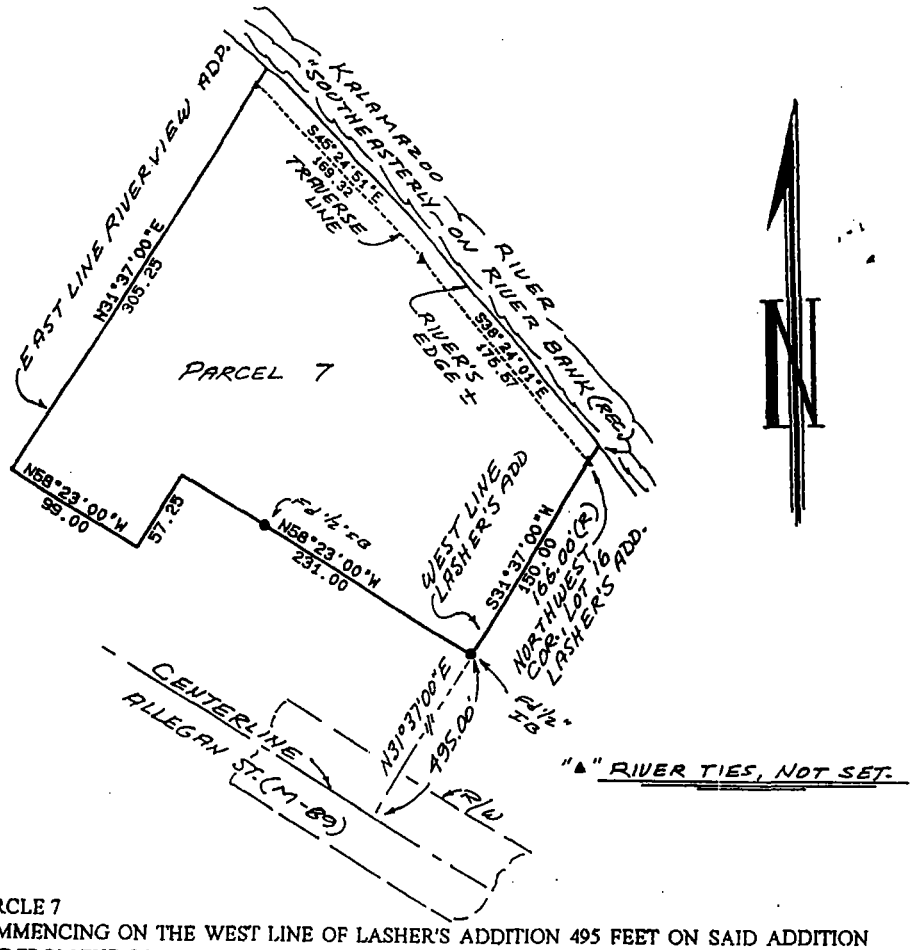
BERYL M. JONES, PLS MI# 23514 DISK#50"963066"

STATE OF MICHIGAN
Beryl M. Jones
SURVEYOR
No. 23514
LICENSED LAND SURVEYOR

WIGHTMAN MOORED, INC.
Land Surveying and Consulting Engineering
114 CHESTNUT ST. ALLEGAN, MI 49010
(616) 673-8465 FAX 673-8464

SURVEYOR'S CERTIFICATE

LIBER 2811 PAGE 609



PARCLE 7
COMMENCING ON THE WEST LINE OF LASHER'S ADDITION 495 FEET ON SAID ADDITION LINE FROM THE CENTER LINE OF ALLEGAN STREET; THENCE NORTH 58°-23' WEST 231 FEET; THENCE SOUTH 31°-37' WEST 57.25 FEET; THENCE NORTH 58°-23' WEST 99 FEET TO THE EAST LINE OF RIVERVIEW ADDITION; THENCE NORTH 31°-37' EAST TO LEFT BANK OF THE KALAMAZOO RIVER; THENCE SOUTHEASTERLY ON SAID RIVER BANK TO THE NORTHWEST CORNER OF LOT 16, LASHER'S ADDITION; THENCE SOUTHWESTERLY TO BEGINNING. SECTION 30, TOWN 1 NORTH, RANGE 11 WEST.

LEGEND:
O – 1/2" IRON SET
● – CORNER FOUND
R – "RECORDED AS"

0' 50' 100' 200'

BEARING SOURCE: LASHER'S ADDITION

LOCATION: NORTH 1/2, SECTION 30, T 1N -R 11W, CITY OF PLAINWELL TWP., ALLEGAN CO., MICHIGAN.

CERTIFIED TO: SIMPSON PLAINWELL PAPER CO.

I HEREBY CERTIFY THAT I HAVE SURVEYED AND MAPPED THE LAND ABOVE PLATTED AND/OR DESCRIBED ON THIS DATE, AND THAT THE RATIO OF CLOSURE ON THE UNADJUSTED FIELD OBSERVATIONS WAS 10,000', AND THAT ALL OF THE REQUIREMENTS OF P.A. 132, 1970 HAVE BEEN COMPLIED WITH.

BY: Beryl M. Jones DATE: 10-18-96

BERYL M. JONES, PLS MI# 23514 DISK#50 "967066W"

STATE OF MICHIGAN
Beryl M. Jones
SURVEYOR
No. 23514
LICENSED LAND SURVEYOR

WIGHTMAN MOORED, INC.
Land Surveying and Consulting Engineering
114 CHESTNUT ST. ALLEGAN, MI 49010
(616) 673-8465 FAX 673-5464

EXHIBIT 2

Attachment 7

Restrictive Covenant for OU7

37/4/10

STATE OF MICHIGAN
ALLEGAN COUNTY
RECORDED
25 MAR 2005 8:30:43 AM
JOYCE A. WATTS
REGISTER OF DEEDS

REC'D MAR 23 2005

DECLARATION OF RESTRICTIVE COVENANTS AND ENVIRONMENTAL PROTECTION EASEMENT

MDEQ Reference No.: RC-RRD-03-052

U.S. EPA Site No.: 059B

This Declaration of Restrictive Covenants and Environmental Protection Easement is made by and between **Plainwell Inc.**, a Delaware Corporation, Grantor; the **Michigan Department of Environmental Quality** ("MDEQ" or "Grantee"), having an address c/o Director, Michigan Department of Environmental Quality, P.O. Box 30473, Lansing, Michigan 48909-7973, Grantee, and the **United States of America** and its assigns ("Third Party Beneficiary"), having an address c/o the United States Environmental Protection Agency ("U.S. EPA"), Attn: Director, Superfund Division, Region 5, 77 W. Jackson Blvd. SR-6J, Chicago, Illinois 60604.

REC'D MAR 24 2005

This Declaration of Restrictive Covenants and Environmental Protection Easement has been recorded with the Allegan County Register of Deeds for the purpose of protecting public health, safety, and welfare, and the environment by: (1) granting a right of access to the U.S. EPA and MDEQ and their authorized representatives to monitor and conduct Response Activities, as that term is defined below; and (2) restricting unacceptable exposures to hazardous substances located on the 12th Street Landfill property, as legally described on Exhibit 1 hereto ("Property"); (3) assuring that the use of Property is consistent with the exposure assumptions and control measures required pursuant to the Record of Decision ("ROD") issued by MDEQ and concurred with by the U.S. EPA on September 28, 2001 pursuant to the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. § 9601 *et seq.* ("CERCLA"); and (4) preventing damage or disturbance of any element of the remedial action constructed on the Property.

The Property is part of the Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site (the "Site"). The Site was placed on the National Priorities List on August 30, 1990, and is a facility, as that term is defined in Section 101(9) of CERCLA and Section 20101(0) of Part 201, Environmental Remediation, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, MCL 324.20101(0) *et seq.* ("NREPA"). The Property comprises a portion of the 12th Street Operable Unit #4 of the Site for which on-going remedial actions are being conducted in accordance with the ROD. Information pertaining to the environmental conditions at the Property and the remedial actions to be undertaken at the Property is on file with the U.S. EPA and the MDEQ,

Godfrey & ... ... Stricker

Remediation and Redevelopment Division.

The restrictions contained in this Declaration of Restrictive Covenants and Environmental Protection Easement are based upon information available to the U.S. EPA and MDEQ at the time the ROD was issued. Failure of the remedial action to achieve and maintain the criteria, exposure controls, and requirements specified in the ROD; future changes in the environmental condition of the Property or changes in the cleanup criteria developed under CERCLA and the NREPA; the discovery of environmental conditions at the Property that were not accounted for in the ROD; or use of the Property in a manner inconsistent with the restrictions described herein, may result in this Declaration of Restrictive Covenants and Environmental Protection Easement not being protective of public health, safety, and welfare, and the environment.

Property Identification Number: 0317-024-047-00

Exhibit 2 provides a survey of the Property that is subject to the land use or resource use restrictions specified herein.

Summary of Response Activities

The Property was historically used as a landfill for wastes and residuals associated with the manufacturing and recycling of paper. Between 1993 and 1997 Plainwell Inc. conducted a remedial investigation and feasibility study regarding the nature and extent of contamination at the Property. Remedial activities required by the ROD to assure the protection of public health, safety and welfare, and the environment and ensure the integrity of the remedy include, but are not necessarily limited to: the construction of a landfill cap and containment systems to contain paper residuals and soils and sediments contaminated with polychlorinated biphenyls ("PCBs) and prevent the erosion of PCB contaminated materials into the Kalamazoo River, construction and maintenance of a fence; construction, operation and maintenance of groundwater monitoring system; and establishment of the land use and resource use restrictions contained herein.

Definitions

"MDEQ" means the Michigan Department of Environmental Quality, its successor entities, and those persons or entities acting on its behalf.

"Owner" means, at any given time, the then current rifle holder of the Property or any portion thereof.

"Owners Subsequent to Plainwell" means, at any given time, the then current title holder of the Property or any portion thereof except for Plainwell Inc.

"Plainwell" shall mean Plainwell Inc., the owner of the Property as of the date of the execution of this Declaration of Restrictive Covenants and Environmental Protection Easement, and the Owner for as long as Plainwell Inc. is a current title holder of the Property or any portion thereof.

"Response Activities" shall mean, consistent with Section 101(25) of CERCLA, such actions

as have been or may be necessary to conduct any removal, remedy or remedial action, as those terms are defined in Sections 101(23) and 101(24) of CERCLA, at the Property and/or at the Site, including enforcement activities related thereto.

"U.S. EPA" shall mean the United States Environmental Protection Agency, its successor entities and those persons or entities acting on its behalf.

All other terms used in this document which are defined in Part 3, Definitions, of the NREPA; Part 201 of the NREPA; or the Part 201 Administrative Rules ("Part 201 Rules"), 1990 AACS R 299.5101 et seq., shall have the same meaning in this document as in Parts 3 and 201 of the NREPA and the Part 201 Rules, as of the date of filing of this Declaration of Restrictive Covenants and Environmental Protection Easement.

NOW THEREFORE,

Grantor, on behalf of itself, its successors and assigns, in consideration of the terms of the Settlement Agreement in the jointly administered cases in the United States District Court for the District of Delaware: In re: Plainwell, Inc., et al., Case No. 00-4350 (JWV), and Weyerhaeuser v. Plainwell, Inc. and Plainwell Holding Company, Case No. 04-CV-16 (KAJ), covenants and declares that the Property shall be subject to the restrictions on use set forth below, and conveys and warrants to the Grantee, and its assigns and to the United States of America, and its assigns, as Third Party Beneficiary: 1) an environmental protection easement , the nature, character, and purposes for which are set forth herein; and 2) the right to enforce said use restrictions.

Declaration of Land Use or Resource Use Restrictions

1. The Owner shall prohibit all uses of the Property that are not compatible with the Property's zoned industrial land use designation, the limited industrial land use category under Section 20120a(1)(i) of the NREPA or other use that is consistent with the assumptions and basis for the cleanup criteria developed pursuant to Section 20120a(1)(i) of the NREPA. Cleanup criteria for land use-based Response Activities are located in the Government Documents Section of the State of Michigan Library.

2. The Owner shall prohibit use of the Property or portions thereof, for any of the following purposes:

(a) A residence, including any mobile home or factory built housing, constructed or installed for use as residential human habitation;

(b) A hospital for humans.

(c) A public or private school for persons under 21 years of age.

(d) A day care center for children,

(e) Any purpose involving residential occupancy on a 24-hour basis.

(f) Any other use that would disturb or penetrate the landfill cover or erosion control system as set forth in the ROD.

3. Owners Subsequent to Plainwell shall prohibit activities, and Plainwell shall not perform any activities, on the Property that may result in exposures above levels established in the ROD. These prohibited activities include:

(a) Any excavation, drilling, penetration or other disturbance of the surface or subsurface soils on the Property except as necessitated for compliance with the O&M plan or conducted in accordance with any work plan approved or modified by U.S. EPA with MDEQ concurrence. All excavation, drilling, penetration or other disturbance of the surface or subsurface soils on the Property must be conducted in accordance with a health and safety plan that complies with the Occupational Safety and Health Act of 1970, 20 C.F.R. 1910.120 and the Michigan Occupational Safety and Health Act.

(b) Any construction of buildings on the Property unless plans are submitted to and approved by the MDEQ and U.S. EPA. Any new construction must satisfy the indoor air inhalation criteria of Part 201.

4. Owners Subsequent to Plainwell shall prohibit activities, and Plainwell shall not perform any activities, on the Property that may interfere with any element of the ROD, including the performance of operation and maintenance activities, monitoring, or other measures necessary to ensure the effectiveness and integrity of the remedy.

5. The MDEQ or U.S. EPA may require modifications to the restrictions contained in this Declaration of Restrictive Covenants and Environmental Protection Easement as necessary to assure the integrity and effectiveness of the remedial action required under the ROD or assure the protection of the public health, safety, welfare and the environment.

6. Owners Subsequent to Plainwell shall comply with the applicable requirements of Section 20107a of the NREPA and Part 10 of the Part 201 Administrative Rules.

7. Permanent Markers. The Owner shall not remove, cover, obscure, or otherwise alter or interfere with the permanent markers placed on the Property pursuant to the ROD. Owners Subsequent to Plainwell shall keep vegetation and other materials clear of the permanent markers to assure that the markers are readily visible.

8. Contaminated Soil Management. Owners Subsequent to Plainwell shall manage all soils, media and/or debris located on the Property in accordance with, and Plainwell shall refrain from managing soils, media and/or debris located on the Property in contravention ok the applicable requirements of Section 20120c of the NREPA; Part 111, Hazardous Waste Management, of the NREPA; Subtitle C of the Resource Conservation and Recovery Act, 42 U.S.C. Section 6901 *et seq.*; the administrative rules promulgated thereunder, and all other relevant state and federal laws.

Environmental Protection Easement

9. Access. Grantor grants to Grantee, and its assigns, and to the United States of America, and its

assigns, a Third Party Beneficiary, an irrevocable and continuing right of access at all reasonable times to the Mill Property for the purposes of:

(a) Overseeing and/or implementing the remedial action required in the ROD, including but not limited to installation of a landfill cover system that complies with the relevant portions of Part 201 of the NREPA and conducting any necessary inspection and repair of the capped areas;

(b) Verifying any data or information submitted to U.S. EPA and/or MDEQ and determining and monitoring compliance with the ROD and any implementing Statement of Work;

(c) Verifying that no action is being taken on the Property in violation of the terms of this instrument or of any federal or state environmental laws or regulations;

(d) Monitoring Response Activities at the 12th St. Operable Unit and at the Site and conducting investigations relating to contamination on or near the Site, including, without limitations, sampling of air, water, sediments, soils, and specifically, without limitation, obtaining split or duplicate samples;

(e) Conducting periodic reviews of the Response Activities at the Property and at the Site, including but not limited to, reviews required by applicable statutes and/or regulations; and

(f) Implementing additional or new Response Activities if U.S. EPA and the MDEQ determine:

i) that such activities are necessary to protect public health, safety, welfare, or the environment because either the remedial action has proven to be ineffective or because new technology has been developed which will accomplish the purposes of the remedial action in a significantly more efficient or cost effective manner; and

ii) that the additional or new Response Activities will not impose any significantly greater burden on the Property or unduly interfere with the then existing uses of the Property.

Nothing in this instrument shall limit or otherwise affect U.S. EPA's or MDEQ's right of entry and access or authorities to take Response Activities as defined in this instrument, as well as in Section 20101(1)(ee) of Part 201 of the NREPA, under CERCLA, the National Contingency Plan, **the National Contingency Plan, 40 C.F.R. Part 300**, the NREPA, and any successor statutory provisions, or other state or federal law.

10. Transfer of Interest. The Owner shall provide notice to the U.S. EPA and MDEQ of the Owner's intent to transfer any interest in the Property at least fourteen (14) business days prior to consummating the conveyance. A conveyance of title, easement, or other interest in the Property shall not be consummated by the Owner unless the Owner complies with the applicable provisions of Section 20116 of the NREPA. A copy of this Declaration of Restrictive Covenants and Environmental Protection Easement shall be provided to all future owners, heirs, successors, lessees, easement holders, assigns, and

transferees by the person transferring the interest. The Owner shall include in any instrument conveying any interest in the Property or portion thereafter including but, not limited to, deeds, leases, and mortgages a notice which is in substantially the following form:

NOTICE: THE INTEREST CONVEYED HEREBY IS SUBJECT TO A DECLARATION OF RESTRICTIVE COVENANTS AND ENVIRONMENTAL PROTECTION EASEMENT, DATED _____, 200_., AND RECORDED WITH THE ALLEGAN COUNTY REGISTER OF DEEDS, LIBER , PAGE

11. Notices. Any notice, demand, request, consent, approval, or communication that is required to be made or obtained under this Declaration of Restrictive Covenants and Environmental Protection Easement shall be made in writing and include a statement that the notice is being made pursuant to the requirements of this Declaration of Restrictive Covenants and Environmental Protection Easement, MDEQ Reference Number RC-RRD-03-052 and U.S. EPA Site No. 059B, and shall be served either personally or sent via first class mail, postage prepaid, as follows:

For U.S. EPA:

Director
Superfund Division
U.S. EPA
77 West Jackson Blvd. SR-6J
Chicago, Illinois 60604

with a copy to:

Eileen L. Furey.
Associate Regional Counsel
U.S. EPA Region 5
77 West Jackson Blvd. C-14J
Chicago, IL 60604

For MDEQ:

Director
Michigan Department of Environmental Quality
P.O. Box 30473
Lansing, Michigan 48909-7973

with a copy to:

Suzanne D. Sonneborn
Assistant Attorney General
Environment, Natural Resources, and Agriculture Division
Michigan Department of Attorney General
525 W. Ottawa St.
Lansing, Michigan 48933

12. Term and Enforcement of Declaration of Restrictive Covenants and Environmental Protection Easement. This Declaration of Declaration of Restrictive Covenants and Environmental Protection Easements and Environmental Protection Easement shall run with the land and shall be binding on the

Grantor, its successors and assigns, including all lessees, easement holders, their assigns, and their authorized agents, employees, or persons acting under their direction and control. This Declaration of Declaration of Restrictive Covenants and Environmental Protection Easements and Environmental Protection Easement may only be modified or rescinded with the written approval of the U.S. EPA and MDEQ.

The State of Michigan, through the MDEQ, the Owner, and the United States on behalf of U.S. EPA, as a Third Party Beneficiary, may enforce the restrictions set forth in this Declaration of Declaration of Restrictive Covenants and Environmental Protection Easements and Environmental Protection Easement by legal action in a court of competent jurisdiction.

13. Severability. If any provision of this instrument is held to be invalid by any court of competent jurisdiction, the invalidity of such provision shall not affect the validity of any other provisions hereof and all sue.& other provisions shall continue unimpaired and in full force and effect.

14. Authority to Execute Declaration of Declaration of Restrictive Covenants and Environmental Protection Easements and Environmental Protection Easement. The undersigned person executing this instrument is the Owner and represents and certifies that he or she is duly authorized and has been empowered to execute and deliver this Declaration of Declaration of Restrictive Covenants and Environmental Protection Easements and Environmental Easement.

15. Nothing in this Declaration of Restrictive Covenants and Environmental Protection Easement affects Plainwell's obligations, if any, under Part 201 of the NREPA, CERCLA, or other State or federal laws, subject to the terms and limitations of the Environmental Settlement Agreement, dated as of October 29, 2003, as may be amended from time to time, among: (a) the United States of America, an behalf of the United States Environmental Protection Agency, the United States Department of the Interior, and the National Oceanic and Atmospheric Administration of the United States Department of Commerce, and including all departments, agencies and instrumentalities of the United States; (b) the State of Michigan, on behalf of Michael A. Cox, Attorney General for the State of Michigan, the Michigan Department of Environmental Quality, and all other departments, agencies and instrumentalities of the State of Michigan; (e) Colonial Heights Packaging, Inc.; (d) Philip Morris USA, Inc.; (e) Chesapeake Corporation; (f) Simpson Paper Company (g) Plainwell Holding Company; and (h) Plainwell Inc., the final version of which, after publication in the Federal Register for the thirty-day public comment period specified by 42 U.S.C. § 9622(i), will be flied with the United States District Court for the District of Delaware.

IN WITNESS WHEREOF, Plainwell Inc. has caused this Declaration of Restrictive Covenants and Environmental Protection Easement to be executed on this 16th day of March, 2005.

Plainwell Inc.

By: _____

Name: Jeff Arnesen

Its: SVP – Chief Financial Officer

STATE OF MINNESOTA
COUNTY OF HENNEPIN

Personally came before me this 16 day of March, 2005, the above-named Jeff Arnesen as Chief Financial Officer of Plainwell, Inc., to me known to be the person who executed the foregoing instrument and acknowledged the same.

Renee Arleen Weiss

Notary Public

RENEE ARLEEN WEISS
NOTARY PUBLIC – MINNESOTA
MY COMMISSION EXPIRES 01/31/2010

Renee Arleen Weiss

[Print or type name]
Commissioned in County Hennepin
My Commission Expires:
Jan 31, 2010

This instrument was prepared by
and after recording, should be returned to:

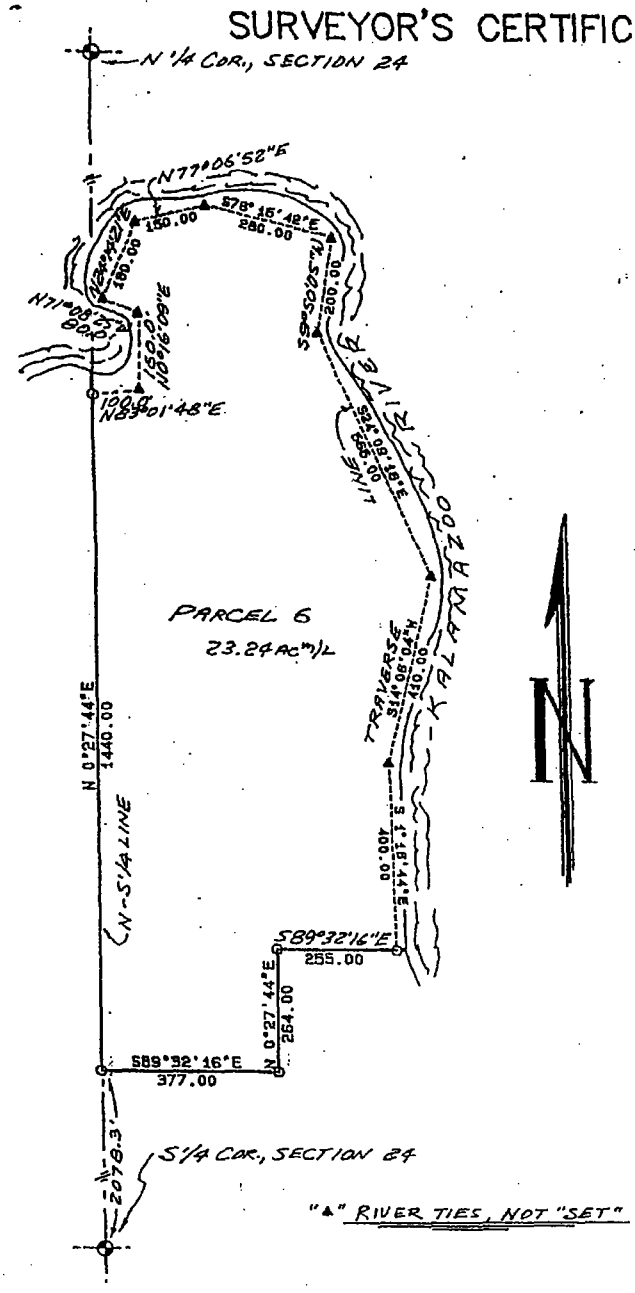
Pamela E. Barker
Godfrey & Kahn, S.C.
780 North Water Street
Milwaukee, WI 53202

EXHIBIT 1

LEGAL DESCRIPTION OF PROPERTY

All that part of the east ½, lying West and South of the Kalamazoo River and described as: Commencing at a point 2078.3 feet North of the South ¼ post of said Section, thence East 377 feet, thence North 264 feet, thence East 255 feet, to the low water mark of the Kalamazoo River, thence Northerly and Westerly along said low water mark of the Kalamazoo River to the North and South ¼ line of Section 24, thence South along said ¼ line to the point of beginning, Section 24, Town 1 North, Range 12 West. Together with an easement for ingress and egress running from subject property to Highway M-89 as set forth in deed recorded in Liber 487 on Page 112.

SURVEYOR'S CERTIFICATE



PARCEL 6
ALL THAT PART OF THE EAST 1/2, LYING WEST AND SOUTH OF THE KALAMAZOO RIVER AND WEST OF A LINE COMMENCING AT A POINT 2078.3 FEET NORTH OF THE SOUTH 1/4 POST OF SAID SECTION; THENCE EAST 377 FEET; THENCE NORTH 264 FEET; THENCE EAST 255 FEET, TO THE LOW WATER MARK OF THE KALAMAZOO RIVER THENCE NORTHERLY AND WESTERLY ALONG SAID LOW WATER MARK OF THE KALAMAZOO RIVER TO THE NORTH AND SOUTH 1/4 LINE OF SECTION 24; THENCE SOUTH ALONG SAID 1/4 LINE TO THE POINT OF BEGINNING. SECTION 24, TOWN 1 NORTH, RANGE 12 WEST.

LEGEND:
- O – 1/2" IRON SET
- ● – CORNER FOUND
- R – "RECORDED AS"

0' 150' 300' 600'

BEARING SOURCE: PRIOR SURVEY PLS #8781

LOCATION: E 1/2, SECTION 24, T 1N - R 12W, OTSEGO TWP., ALLEGAN CO., MICHIGAN.

CERTIFIED TO: SIMPSON PLAINWELL PAPER Co.

I HEREBY CERTIFY THAT I HAVE SURVEYED AND MAPPED THE LAND ABOVE PLATTED AND/OR DESCRIBED ON THIS DATE, AND THAT THE RATIO OF CLOSURE ON THE UNADJUSTED FIELD OBSERVATIONS WAS 10,000'±, AND THAT ALL OF THE REQUIREMENTS OF P.A. 132, 1970 HAVE BEEN COMPLIED WITH.

BY: Beryl M. Jones DATE: 10-18-96

BERYL M. JONES, PLS MI# 23514 DISK#SD"96306W6"

STATE OF MICHIGAN
Beryl M. Jones
SURVEYOR
No. 23514
LICENSED LAND SURVEYOR

WIGHTMAN MOORED, INC.
Land Surveying and Consulting Engineering
114 CHESTNUT ST. ALLEGAN, MI 49010
(616) 673-8465 FAX 673-5464

Appendix A

Newspaper Public Notice

PUBLIC NOTICE

U.S. Environmental Protection Agency Region 5

Five-year Superfund Review

King Highway Landfill Operating Unit 3 of the
Allied Paper/Portage Creek/Kalamazoo River Superfund site

Kalamazoo, Michigan

The Superfund law requires regular reviews of sites at least every five years where cleanup is done but hazardous waste remains on-site. The five-year-reviews are to ensure the cleanup protects people and the environment. The review includes a summary of:

- site information
- how the cleanup was done
- how well the cleanup is working
- possible future actions

In 1998, EPA signed a document called a "record of decision" that included the following objectives:

- excavate PCB-contaminated soil, sediment and residue from berms, the King Street storm sewer flood plain, five former lagoons and the Kalamazoo River directly adjacent to the landfill
- place erosion controls on berms to protect the landfill in the event of a 100-year flood
- monitor surface and ground water
- put a fence around landfill and lagoons and put permanent markers on fences
- impose deed restrictions

EPA expects to complete the review by Oct. 21. Anyone with questions about the review may contact Shari Kolak, EPA remedial project manager, or Don de Blasio, EPA community involvement coordinator.

The complete ROD may be reviewed at:

Allegan Public Library
331 Hubbard St.
Allegan

~~Kalamazoo Public Library~~
315 S. Rose St.
Kalamazoo

Saugatuck-Douglas Library
10 Mixer St.
Douglas

Charles Ransom Library
130 S. Sherwood
Plainwell

Otsego District Library
219 S. Farmer St.
Otsego

Waldo Library
Western Michigan University
1903 W. Michigan Ave.
Kalamazoo

For more information:

Don de Blasio
Community Involvement Specialist
EPA Office of Public Affairs (P-19J)
77 W. Jackson Blvd.
Chicago, IL 60604
312- 886-4360
Toll-free: 800-621-8431,
Ext. 64360, weekdays 10 a.m. – 5:30 p.m.

Shari Kolak
Remedial Project Manager
EPA Superfund Division (SR-6J)
77 W. Jackson Blvd.
Chicago, IL 60604
312-886-6151
Toll-free: 800-621-8431,
Ext. 66151, weekdays 10 a.m. – 5:30 p.m.

1055469-01